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#110 October 2004
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Electric Power Tools

60 TOOTH CARBIDE BLADE



10" COMPOUND SLIDE MITER SAW

- Powerful 10.8 amp motor, 1-3/4 HP
- Dual rail with linear ball bearings and self-cleaning dust seals for smooth slide action
- Positive stops at 0, 22-1/2° and 45° left and right
- Precision machined table Comes with hold-down clamp, 10" x 60 tooth C2 carbide tipped blade, wrench, dust bag and spare brushes. Motor: 110V, 60 Hz, single phase, 4000 RPM max; Arbor: 5/8"; Cutting capacity 5-3/8" max; Weight: 51.6 lbs.

ITEM ~~\$199~~ **\$99.99**
90891-1SVA

CENTRAL PNEUMATIC®

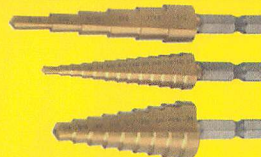
TWO BUILT-IN UNIVERSAL QUICK CONNECT COUPLERS FOR CONVENIENT AIR HOSE CONNECTION



4-1/2 HP, 21 GALLON, CAST IRON, VERTICAL COMPRESSOR

- Long-life oil lubricated compressor with precision machined cast iron sleeve
- Twin capacitor motor with thermal overload protection
- Oil level indicator
- 6" wheels
- Vibration-damping foot stabilizers
- 4-1/2 HP; 120 volt, 60 Hz; 125 PSI max; 4.4 CFM @ 90 PSI; 11.1 CFM @ 40 PSI; Shipping wt.: 152 lbs.

ITEM ~~\$199~~ **\$169.99**
47065-2SVA



3 PC TITANIUM NITRIDE COATED M2 HIGH SPEED STEEL STEP DRILLS

This compact set replaces 28 individual drill bits. Two-flute design gives you faster, smoother cutting. Titanium nitride coating for cooler running.

- Automatically deburrs holes as you drill
- Quick-change 1/4" hex shank
- M2 high speed steel for long life
- Includes Six Step Bit: 3/16" to 1/2"; Nine Step Bit: 1/4" to 3/4"; Thirteen Step Bit: 1/8" to 1/2"

ITEM ~~\$28~~ **\$13.99**
91616-1SVA

Lifetime CARBIDE



10", 50 TOOTH ALTERNATE TOP BEVEL DESIGN NOVELTY COMBO BLADE

- C3 tungsten carbide tips
- Heat-treated surface ground steel alloy body
- Hand tensioned
- Copper plugged expansion slots for noise reduction
- Tips ground to keen micro sharp edge
- Arbor: 5/8"; Size: 10"; Teeth: 50; 7000 RPM max.

ITEM ~~\$13~~ **\$6.99**
46231-6SVA



18 GAUGE, 3/8" TO 2" AIR BRAD NAILER

Use this compact, lightweight, brad tool for jobs requiring a strong pin and an easily concealed hole. Perfect for linear strips, window casings, paneling and facing strips, wall paneling, and corner fillets. Constructed for high-volume production applications. Includes wrenches and tool oil.

- 3/8" to 2" brad size range
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- Weights only 4-1/4 lbs.

CENTRAL PNEUMATIC CONTRACTOR SERIES

ITEM ~~\$49~~ **\$19.99**
46309-4SVA

CENTRAL MACHINERY

7" INDUSTRIAL RABBETING JOINTER WITH STAND



- Heavy-duty cast iron table, 41-1/2" wide
- Motor: 1 HP, 110V, 5.9 amps
- Max. depth of cut: 1/2"
- Rabbet cut: 1/2" Cutting width: 7"
- Rabbeting ledge: 3-1/4"
- Fence tilt: 45°, positive stops at 45° and 90°
- Fence: 35-3/8" x 3-3/4"
- Cutter head speed: 4655 RPM

ITEM ~~\$299~~ **\$219.99**
31849-5SVA
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SANDING SPONGES (10 PACK) 1/2 OFF!

Flexible foam sanding pads conform to almost any shape without altering the contours of the item. Great for sanding odd shapes, edges and into grooves. Reusable and washable, they last longer than sandpaper with less cleanup. Coated with an aluminum oxide abrasive for use with wood, drywall or metal.

- Can be used wet or dry
- 3-7/8" long x 2-5/8" wide x 1" thick

GRIT	ITEM	PRICE
Coarse	46751-2SVA	\$249
Medium	46752-2SVA	\$249
Fine	46753-2SVA	\$249

DEWALT

DeWalt DW733R



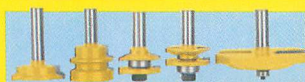
EXTRA LONG TABLE

LIMITED QUANTITIES

HEAVY DUTY 12-1/2" PORTABLE PLANER

- 4 column design with head lock
- Turret depth stop for accurate cuts
- Magnified, easy-to-read depth scale
- Maximum speed: 20,000 CPM
- Feed rate: 26 FPM
- Amps: 15
- Factory reconditioned, factory perfect

ITEM ~~\$319~~ **\$289.99**
51736-4SVA



6 PC., C2 CARBIDE KITCHEN DOOR & DRAWER BIT SET

Make custom kitchen cabinetry, raised panel doors, table tops and drawer assemblies with these specially selected bits.

- C2 carbide tips
- Fully shielded bearings
- Raised panel bit specs: 1-1/2" profile width; 5/8" cutter height, 3-1/2" cutter dia.; Stile & rail bit: 7/16" profile width; 7/8" cutter height, 1-3/4" cutter dia.; Reverse glue join bit: 1/2" profile width, 1-1/4" cutter height 1-3/4" cutter dia.; Drawer lock bit: 7/16" profile width, 1/2" cutter height, 1" cutter dia.; 8000 max. RPM; 1/2" shanks

ITEM ~~\$59~~ **\$39.99**
90011-2SVA

DRILL MASTER

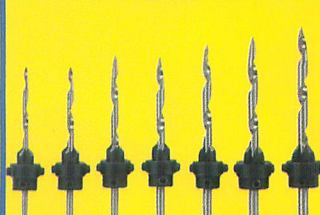


14.4 VOLT 3/8" CORDLESS DRILL KIT WITH KEYED CHUCK

High voltage, heavy duty battery for long run times between charges. T-Handle design makes this drill easy to use. Includes charger, 14.4V battery. (NOT SHOWN)

- Variable speed, reversible
- 6 torque settings
- Speed: 0 - 550 RPM
- Chuck size: 3/8"
- Tool weight: 4.4 lbs.

ITEM ~~\$32~~ **\$14.99**
04285-6SVA



22 PC. TAPERED HIGH SPEED STEEL DRILL BITS & COUNTERSINKS

Single twist design efficiently ejects chips for cleaner holes. Comes in individually organized wooden box. Includes seven each of drill bits, countersinks, and stop-collars.

ITEM ~~\$11~~ **\$5.99**
00550-1SVA

BISCUIT JOINER WITH TILTING FENCE



- 120V, 6.8 amp motor
- 10,000 RPM maximum speed
- Sealed ball bearings for extended life
- Convenient biscuit adjustment dial
- Die-cast aluminum fence tilts from 0-90°
- Soft rubber grip handle
- 4"; 6 tooth blade with carbide tips
- Biscuit settings: 0, 10, & 20; Fence adjustment: 1" to 3"; Maximum depth of cut: 0.63"; Shipping weight: 10.30 lbs.
- Includes: Blade, dust bag, wrench, extra carbidebrushes and carrying case

ITEM ~~\$49~~ **\$49.99**
47377-3SVA
4", CARBIDE TIPPED BISCUIT JOINER BLADE
ITEM 47401-1SVA **\$5.99**

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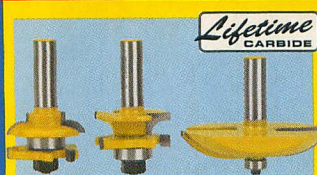
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- Fully shielded bearings
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- Stile bit: 3/8" profile width, 3/4" cutter height, 1-1/16" cutter diameter
- Rail bit: 3/8" profile width, 3/4" cutter height, 1-1/16" cutter diameter
- 1/2" shanks, C2 carbide cutting tips, 8000 RPM max.

~~\$399~~ **\$1999**

ITEM 90009-1SVA

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CONTRACTOR SERIES

10 GAUGE, 21 DEGREE FRAMING NAILER KIT

Drives full-head nails from 2" to 3-1/2" long.

- 21° angled magazine
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- 360° exhaust
- Comfort grip

Comes with blow mold case, goggles, oil, wrenches and 180 nails; 70-120 PSI; 3-3.5 CFM; 1/4" NPT inlet; contact tip safety; Nonmarring rubber boot; Adjustable depth drive; Tool weight: 9.9 lbs; Shipping weight: 16.4 lbs.

~~\$199~~ **\$8999**

ITEM 04041-5SVA

CENTRAL MACHINERY

LIMITED
QUANTITIES

14", 4 SPEED WOOD- WORKING BANDSAW

You won't find a better value on an industrial-quality bandsaw. Cut curves and compound curves up to 6" deep in wood or plastic. Precision cast iron table tilts 45° for bevel cuts. Table groove allows accurate measurement with a miter gauge.

Speeds: 600, 1140, 1670, & 2670 FPM; Capacity: 6"; Frame-to-blade: 14"; Overall dimensions: 24-1/2" x 19-1/2" x 65-1/2"; Table: 14" x 14"; Shipping weight: 191 lbs.

~~\$3299~~ **\$26999**

ITEM 32208-8SVA

DRILL
MASTER

18 VOLT, CORDLESS 4 TOOL COMBO PACK

Includes 3/8" variable speed reversible drill, oscillating triangle sander, 8 watt flashlight, jigsaw, blade, hex key, one 18 volt long run battery, charger and carrying case. Includes one of the four batteries shown.

Drill: 3/8" keyless chuck, 0-900 RPM, 8 torque settings; Sander: Triangular pad, oscillating, 6000 OPM, rocker switch; Flashlight: 0° to 90° swivel head, 8 watt bulb, pistol grip; Jigsaw: reciprocating, 1/2" stroke, 1700 SPM, blade guard, angle adjustment, includes one 24 tooth wood (pin type) blade and hex key; Shipping weight: 13 lbs.

~~\$599~~ **\$2999**

ITEM 90374-3SVA

DEWALT

DeWalt DW705R

LIMITED
QUANTITIES

12" HEAVY DUTY COMPOUND MITER SAW

- Spindle lock
- Electric brake
- Stainless steel miter scale with 9 positive stops
- 0-48° bevel capacity
- 0-48° miter left and right
- Factory reconditioned, factory perfect
- Capacities 5-1/4" crown moulding; 2 x 8 at 45° bevel; 4 x 4 & 2 x 6 at 45° miter weight

~~\$209~~ **\$20999**

ITEM 51594-3SVA

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3" x 21"

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- Compact and lightweight design
- All ball bearing double insulated motor
- Rubber grip
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Belt speed: 1,250 feet per minute; UL listed, 120V, 6 amp peak; Overall dimensions: 13-1/8" L x 5-3/8" W x 5-7/8" H; Tool weight: 7.8 lbs.

~~\$399~~ **\$1999**

ITEM 90045-3SVA

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12" BENCH DISC SANDER

- 1-1/4 HP motor
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- Table tilts 0° - 30° and 0° - 50° in 10° increments
- Vacuum port
- Miter gauge adjusts from 30° - 90° L/R in 1° increments

Motor: 115V, 22.7 amps, 1.25 HP, 1750 RPM; Vacuum port: 2, 802"; Table size: 16-3/8" L x 6-7/8" W; Table height: 7-5/8" from base; Overall dimensions: 19-5/8" x 16-3/8" x 14-5/8"; Net weight: 83.2 lbs.

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ITEM 43468-1SVA

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Motor: 1/2 HP, 110V, 5.5 peak amps; Speeds: 1125, 1640, 2360, and 3450 RPM; Swing over bed: 14"; Distance between center: 40"; Bed: 2 lengths 1-3/4" steel tubing; Tool rest: 12" x 3/4"; Drive: V-belt; Overall size: 57-1/2" x 8-1/2" x 14"; Tool weight: 88 lbs.

~~\$1299~~ **\$7999**

ITEM 45276-5SVA

CARBIDE
TIP

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5 PC. STRAIGHT ROUTER BIT SET

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~~\$999~~ **\$4999**

ITEM 38357-5SVA

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- Includes 1/4", 1/2", and 3/8" collets
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- 3 adjustable plunge settings
- Electric brake

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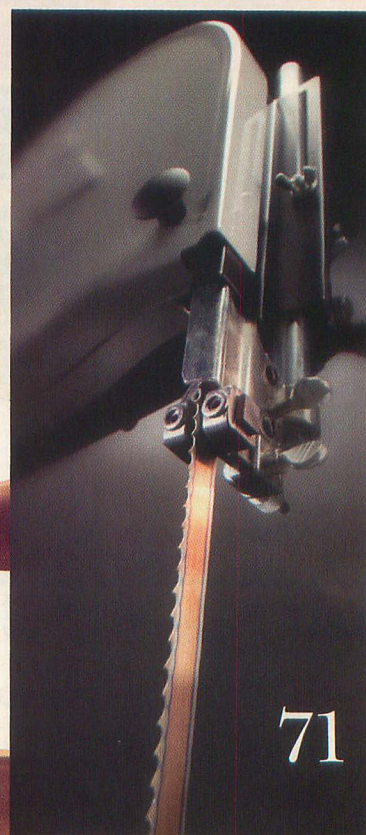
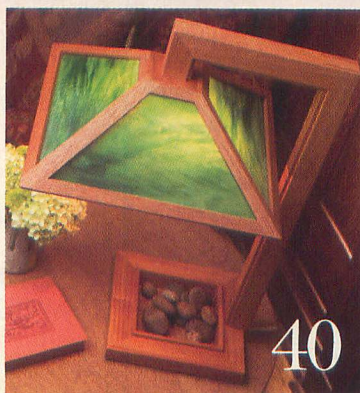
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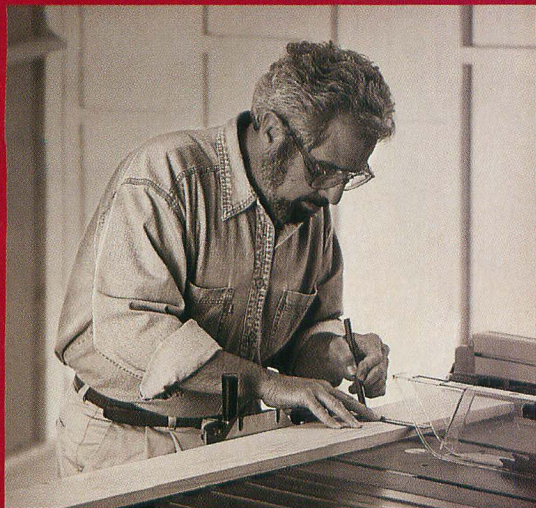
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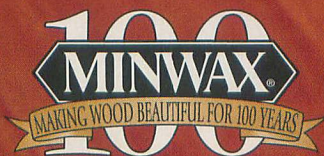
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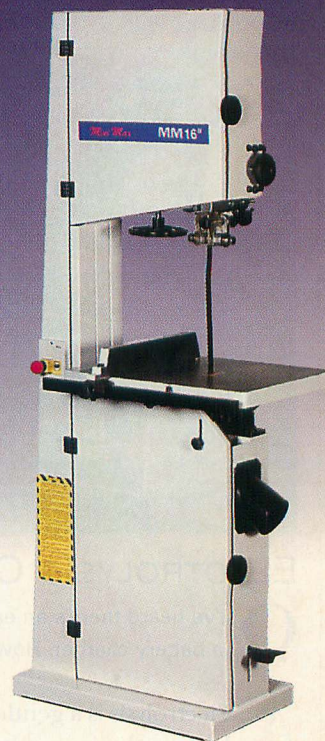
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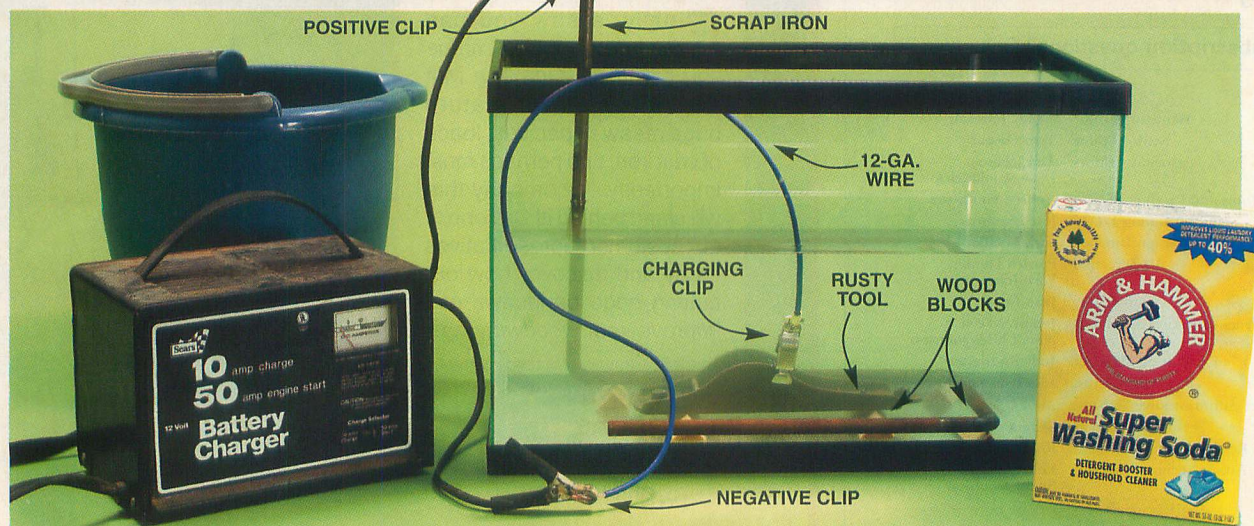
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QUESTION & ANSWER by Bruce Kieffer and Richard Tendick



ELECTROLYSIS CLEANS RUSTY TOOLS

Q I've heard there's an easy way to remove rust from small tools using a battery charger. How does it work?

A Electrolysis is a gentle, safe way to chemically remove all the rust, leaving the iron untouched. An abrasive can remove rust, too, but it may require removing a large amount of metal, either weakening the piece or destroying its value.

Here's what you need: A small battery charger, a plastic or glass container, washing soda (available in the laundry-detergent aisle at grocery stores), scrap iron, a charging clip and a couple feet of wire.

Here's how it works: Follow the setup in Photo 1. The tool gets a negative charge and the scrap iron gets a positive charge. The rust flees from

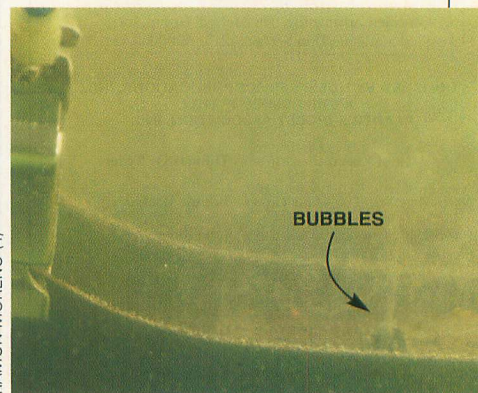
the negatively charged tool and is attracted to the positively charged scrap iron. The cleaning action occurs only in a line-of-sight manner, so it's best if the scrap iron surrounds the tool. When you've wired the tool and scrap-iron rod, plug in the charger. The lowest setting is all you need. Bubbles mean it's working (Photo 2). Eventually, a reddish brown crud will appear on the water's surface (Photo 3). When bubbles no longer form on the tool, you're done. Clean the tool with water and a gray 3M finishing pad. Treat your restored tool to a coat of rust-inhibiting wax or spray.

SAFETY CONSIDERATIONS

Electricity and water can be dangerous. Keep the charger away from the water in case of an accidental spill. Unplug the charger prior to placing your hands in the water.

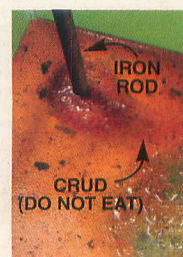


1 Electrolysis is not a complex operation. Mix one tablespoon of washing soda in one gallon of water. Pour this solution over the tool until it is covered. Hook the charger's black negative clip to the tool using a length of 12-gauge wire and a charging clip. This keeps your charger lead out of the soup. The red clip must be hooked to a portion of scrap-iron rod that is *out* of the water, because it would be eaten away in the water. Wooden blocks suspend the tool so the bottom gets cleaned as well.



2 Bubbles indicate the process has started. Now all you have to do is wait until the bubbles stop. This plane iron took a day and a half.

3 The orange crud on top is all that rust fleeing from the negatively charged tool to the positively charged iron rod. This is a good thing. It looks terrible, but this nontoxic sludge can be poured down the drain.



What Happens When Power And Precision Unite?

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10
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TOOLS



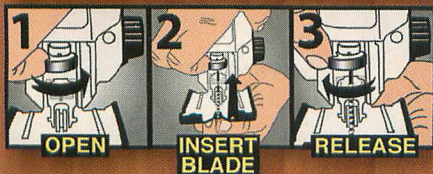
Freud's New FJ85K Heavy Duty Jigsaw With Cruise Control

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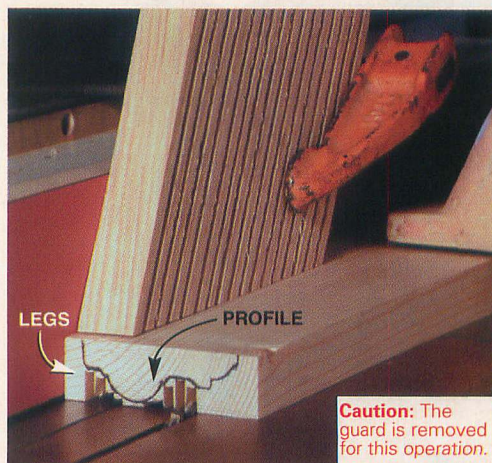
Maryland

Rockville

QUESTION & ANSWER

**MAKE
YOUR OWN
TABLESAW
MOLDINGS**

Q I'm restoring an antique that's missing a piece of trim molding. I can't find a router bit profile that even comes close. How can I make a small section of molding to match the original?



BILL ZUEHLKE

A You can use your table saw to rough out the profile and then finish the shape with sanding blocks or a few basic carving chisels. First, trace the profile of the original on the end of a board. Use an extra wide board to provide legs for the molding to stand on as it's being shaped on the saw. Adjust the blade height so the cut is just shy of the mark. Cutting too deep will ruin the molding, and you know Murphy's law says that'll happen on the last cut.

Position the rip fence to guide the stock through the cut. Readjust the fence and the blade height as you work your way across the entire profile.

When you've rough-cut the molding, turn it on its back and rip to finish width. Refine the shape with sandpaper, a block plane, scrapers or carving chisels.

SMELLY GLUE

Q I bought a gallon of glue to save money. It has been more than a year and I've only used about half the gallon. The leftover glue has developed a rotten smell. Is the glue still good?

A According to the folks at Franklin Adhesives, your best bet is to toss the old stuff and buy a fresh bottle. The glue may be OK; a bad odor does not necessarily mean the glue has gone bad. But consider what your project is worth and whether you want to risk joint failure for the price of a bottle of glue.

Glues have a preservative in them to keep bacteria or fungus from setting up shop. But the preservative only delays the inevitable. Most woodworking glue has a shelf life of a year. Even though it's tempting to buy a big bottle to save money, you're better off in the long run buying glue in a size you know you'll use up in a year.

Tip: Write the purchase date on the glue bottle. That way, you'll know when it's time to buy fresh.

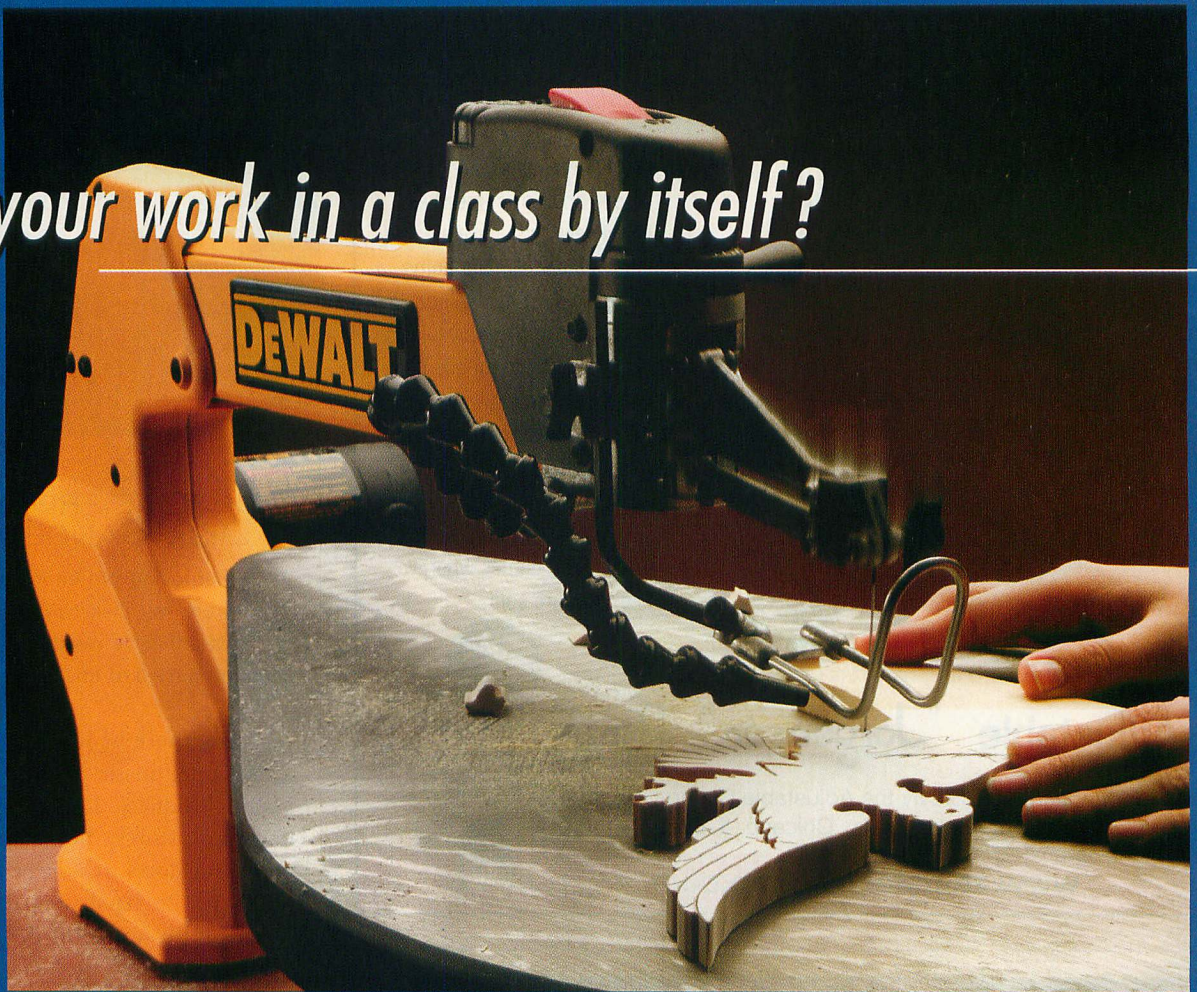


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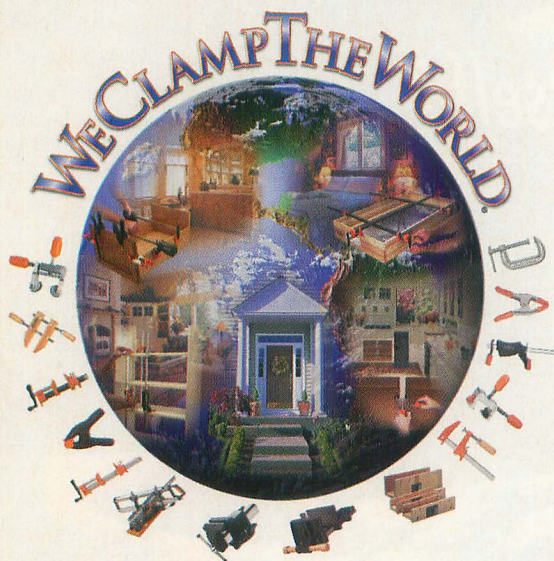
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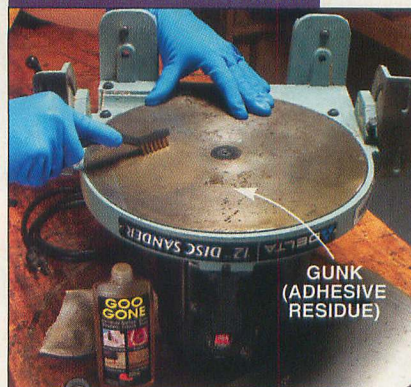
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www.adjustableclamp.com



QUESTION & ANSWER



CLEANING ADHESIVE FROM A DISK SANDER

Q Removing old sanding disks from my disk sander leaves globs of adhesive residue. Is there a way to get rid of this stuff?

A Yes, there is! It's called Goo Gone, made by American Magic Products. Look for it at hardware stores, home centers and drug stores. It's citrus based, so it's not as harsh as paint solvents, and it works on this problem like nobody's business.

Remove the disk sander's table and lower guard or dust shroud. If you can, tilt your sander so the disk is horizontal. Squirt some Goo Gone on the disk and let it soak for a few minutes. Then scrub the disk with a small fine-bristle wire brush. When the adhesive residue is all dissolved, wipe off the Goo Gone with paper towels. Clean the disk with water to remove any remaining Goo Gone solution and dry the disk. **AW**

Source

Magic American Products
(800) 321-6330
www.googone.com
Goo Gone, 8 fl. oz. bottle, \$5.



If you have a question you'd like answered, send it to us at: **Question & Answer, American Woodworker**, 2915 Commers Drive, Suite 700, Eagan, MN 55121 or e-mail to qanda@readersdigest.com. Sorry, but the volume of mail prevents us from answering each question individually.

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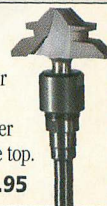
- 1/4" and 1/2" collets

3 HP, 15 amp, 110-120 VAC.
Includes instruction manual and storage case for entire kit.

Router Collet Extension

Give your 1/2" shank router bits an additional 2-1/4" when you extend your router bit through the router table top.

#1456\$24.95



Pro Cabinetmaker 6 Piece Router Bit Set

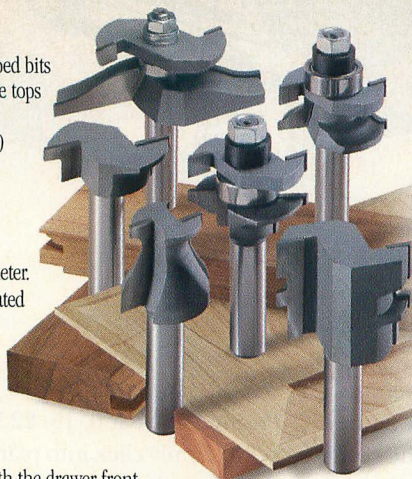
Professional quality 1/2" shank carbide tipped bits for making raised panel doors, kitchen table tops and drawer assembly. For stock up to 3/4".

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5. The Drawer Lock bit makes the cut in both the drawer front and drawer side for a strong, precise joint. 1-3/4" large diameter.
6. The Round Over & Ogee Door Lip bit finishes your door edge professionally in one pass.

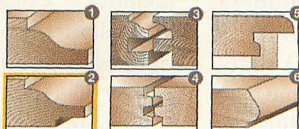
All bits are intended for use in a router table only.

#1453 6 Piece Undercutter set\$135.95

#1452 6 Piece Standard set\$114.95



Wood storage box included



Raised Panel Door 40 min. Instructional Video

A woodworking professional makes a raised panel, rail and stile frame, and other cabinet doors.

#1438 List \$19.95\$9.95

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#1459 1/4" shank set.....\$189.95

#1460 1/2" shank set.....\$189.95



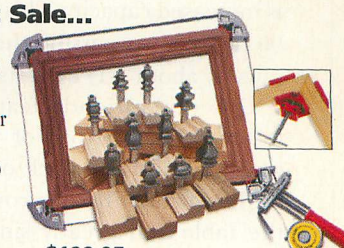
Storage Box can be wall mounted

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THE WELL-EQUIPPED



LARGER-CAPACITY MITER SAW

Delta has put a new twist on miter saws by mounting the motor vertically, instead of horizontally, on its new 36-412 12-in. dual-bevel compound miter saw. The result is increased capacity. This machine will crosscut a 2x10 at 90 degrees, surpassing the capacity of other 12-in. miter saws by about 1-1/2 in. Its street price is around \$399.

Other user-friendly features include a bevel lock that's located on the front of the saw so you don't have to reach around the back of the machine when adjusting for bevel cuts. Flip-up crown-molding stops are built into the table and greatly simplify cutting crown molding. The fence halves are locked in place with cam levers, slightly more convenient than the thumbscrews found on most miter-saw fences. The 36-412 uses a 15-amp motor, comparable to those on other miter saws, and comes with a good quality 60-tooth blade and a dust bag.

The saw table angles to 48 degrees left and right. Positive stops at 0, 15, 22.5, 31.6 and 45 degrees (left and right) firmly click into place. Hash marks on the angle protractor are large and very easy to read. The angle indicator includes 1/2-degree lines, so it's easy to fine-tune the angle in small increments. The saw bevels to 48 degrees left and right, with positive stops at 0, 33.9 and 45 degrees.

The 36-412 is slightly more expensive than other 12-in. compound machines, but it has everything you'd want in a top-of-the-line machine and is a pleasure to use. While its capacity is greater than other miter saws' capacity, it's less than on sliding miter saws. But you'll pay about \$100 more for a slider. The 36-412 is expected in stores in November.

Source
Delta Machinery, (800) 223-7278
www.deltawoodworking.com
36-412 compound miter saw, \$399.

by George Vondriska

QUICK-ACTING CLAMPS

It's hard to beat the convenience of a quick-acting clamp that you can grab, squeeze and tighten—all with one hand. The new Multi-Grip Clamps from Wilton have entered the clamping arena, and their competitive prices are putting the squeeze on other quick-acting clamps. The Multi-Grips cost 10 to 20 percent less than similar clamps.

Like other quick-acting clamps, Multi-Grips can be used to clamp or spread. The spread function lets you gently disassemble parts, with little or no mallet pounding. Clamp pressure is strong enough to pull together well-fitted parts, but as with other quick-acting clamps, I wouldn't rely on it for heavy-duty clamping situations, for instance, holding a router fence in position.

Square-bottomed Multi-Grips will stand on their own, a handy feature when working on a benchtop. If you sometimes need an extra light-duty vise, the Portalock Base will hold a Multi-Grip and can be clamped to a workbench that's 2-1/2 in. thick or less.



Source
Wilton
(888) 804-7129
www.wmhtoolgroup.com
Multi-Grip Clamps,
\$15 to \$40.



PHOTOS SUPPLIED BY MANUFACTURER

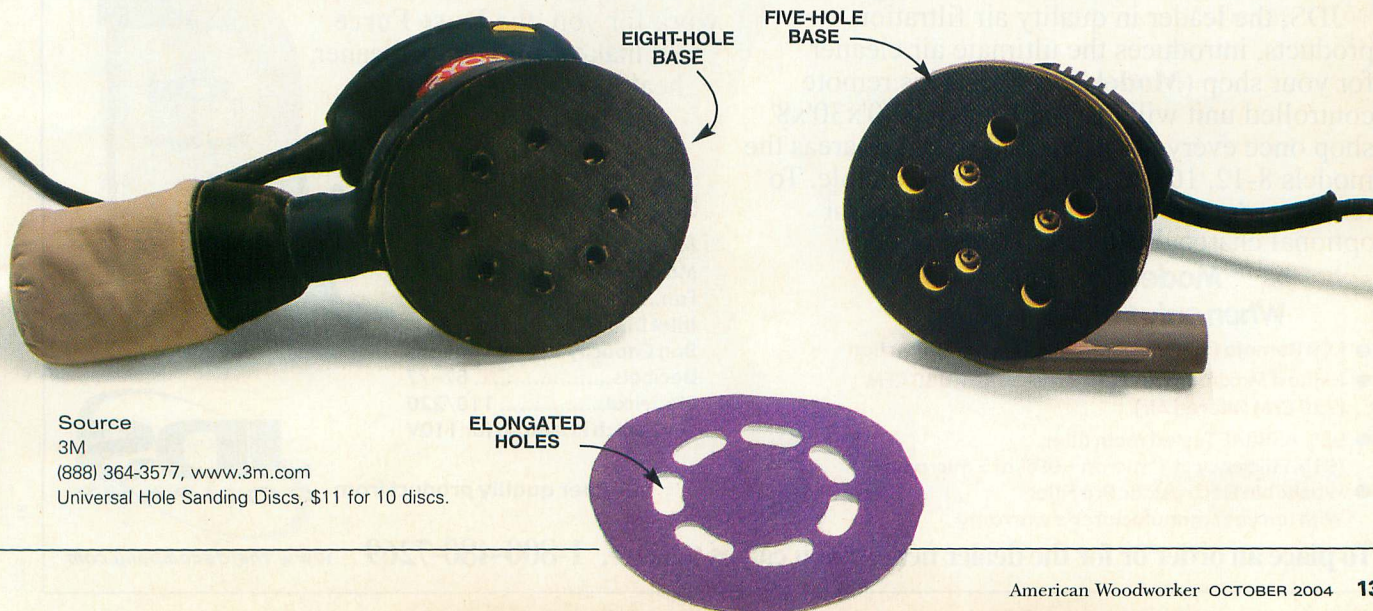
UNIVERSAL RANDOM-ORBIT DISCS

I'm at the home center, trying to remember whether my sander takes five- or eight-hole discs. I've got a fifty-fifty chance, but if I guess wrong, the dust collection on my sander won't work right. Thanks to 3M, I can't pick the wrong disc. The company has hit a hole in one with its Universal Hole random-orbit sander discs, \$11 for 10 discs. They fit 5-in.-dia. five-hole or eight-hole sanders.

It's a simple idea. The holes are slightly elongated,

making them large enough to cover five- or eight-hole patterns. Although its holes are larger than normal, therefore removing some abrasive, it works as well as a standard disc.

The Universal Hole discs are only available in 5-in. hook-and-loop discs in the standard array of grits. The price is comparable to the cost of other high-quality abrasive hook-and-loop discs.



Source
3M
(888) 364-3577, www.3m.com
Universal Hole Sanding Discs, \$11 for 10 discs.

\$1 TAPE MEASURE AND PENCIL CLIP

OK, I admit it: Keeping both a pencil and tape measure close at hand is a problem for me. I generally have only one or the other, sometimes neither. SpeedClip, a clever \$1 solution, clips onto your belt and has built-in holders for a tape measure and pencil. You provide the tape and pencil.

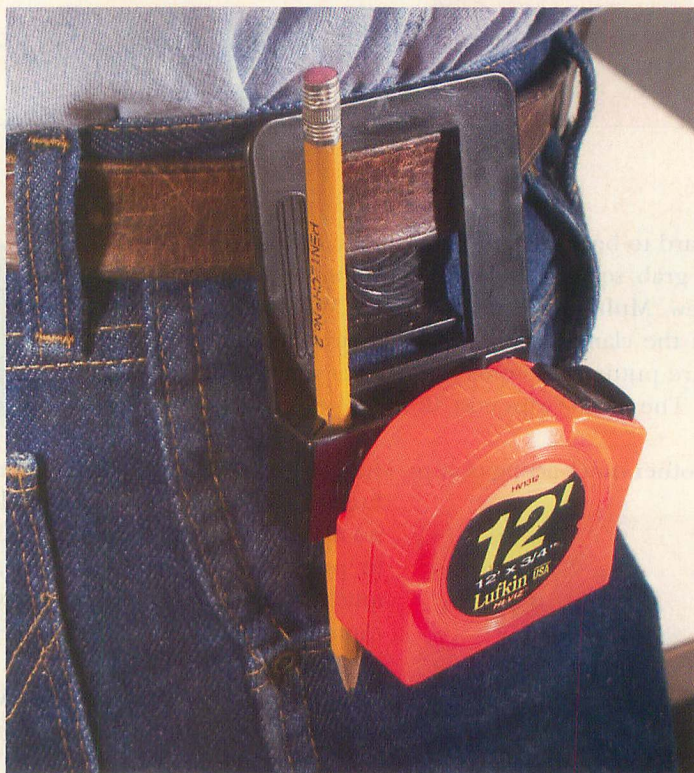
The belt hook wraps around and grabs your belt, so there's no chance of pulling the SpeedClip off when retrieving your pencil or tape. No belt? It can also be hooked onto a pants' pocket. Any tape with a clip on it can be hung on the SpeedClip. A plastic retainer grabs and holds the pencil so it only comes out when you pull it out.

Source

FastCap

(888) 443-3748, www.fastcap.com

SpeedClip, \$1.



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Model 750-ER

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\$299.00

Specifications

Motor.....	1.5 HP
Max CFM.....	1250
Fan.....	11"
Inlet Dia.....	1-5 1/2-4"
Bag Capacity.....	42 gallons
Decibels.....	67-77
Electrical.....	110/220
↳ Switch Prewired for 110V	



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EASY-TO-PAPER SANDER

Finishing sanders remain a useful tool, especially for sanding into corners and on delicate pieces. Sanders of yesteryear vibrated enough to make your hand tingle for a week, and arm wrestling the paper onto most of these machines was enough to make you turn the sander into a paperweight and never use it again. The new Bosch 1297DK quarter-sheet sander, \$55, is a great example of today's smoother- and quieter-running finishing sanders, and it has put an end to the paper wars.

Its SheetLoc system simplifies attaching the paper. The sandpaper edges don't need to be creased; they slip right into the SheetLoc holders. The system stretches the paper tight and holds it with enough gusto to keep it firmly attached.

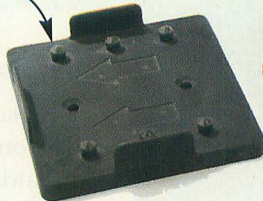
Dust collection is included on the 1297DK, and it works pretty well. Having dust collection means you need holes in the paper, so a punch plate is included with the 1297DK.

The 1297DK operates very smoothly and quietly, with little vibration transmitted to your hand. Its price is comparable to other good-quality finishing sanders. **AW**

Source

Bosch Tools
(877) 267-2499, www.boschtools.com
1297DK finishing sander, \$55.

HOLE PUNCH



SHEETLOC PAPER HOLDER



PHOTO SUPPLIED BY MANUFACTURER



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**YC-15P
15" Planer**
with 3 hp 1 ph motor
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\$799.00

FEATURES: Table height is fixed, motor and cutterhead adjust up and down. Jack screw knife adjustment. Two feed speeds. Dust hood.

**YC-20P
20" Planer**
with 5 hp 1 ph motor and
4-knife cutterhead
\$1199.00

FEATURES: Table height adjustable. Jack screw knife adjustment. Two feed speeds. Dust hood. Solid, cast iron table extensions.

**YC-8J
8" Jointer**
with 1-1/2 hp 1 ph
motor and 3-knife
cutterhead
\$649.00

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FEATURES: Center-mount fence with rack and pinion adjustment. Fence tilts both directions to 45°. Jackscrew knife adjustment. Enclosed stand. Rabbeting table and ledge. Dust hood included.

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edited by David Olson

DUST-FREE BANDSAW

I replaced my bandsaw's wimpy 1-1/2-in. dust-collection port with a shop-made shroud that makes bandsawing virtually dust-free. The secret: My shroud's intake port is much larger (see photo and exploded view, below). Another great feature is that the big hose mounts on the back, so it's out of the way.

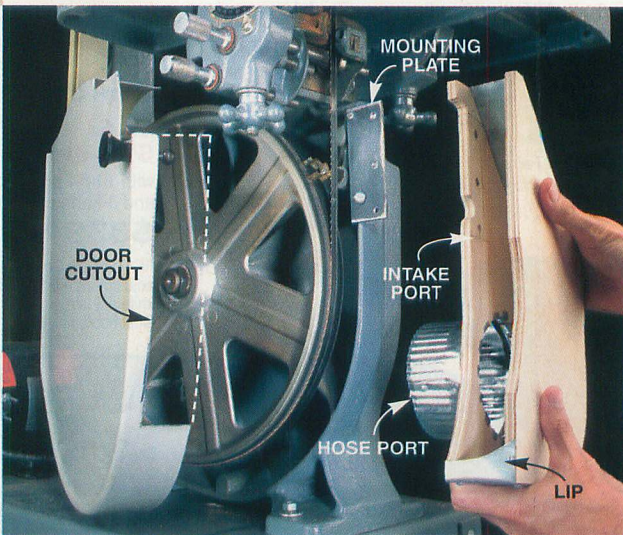
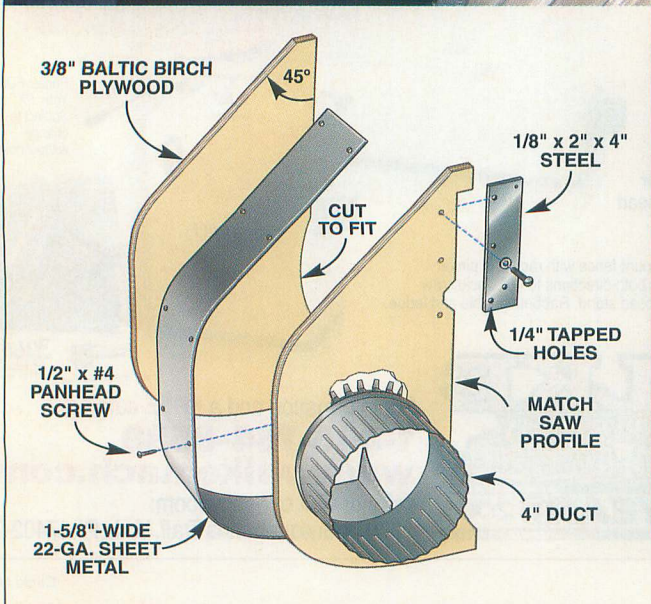
I built this shroud by improving a similar design I'd seen in an old woodworking magazine. My shroud is mounted on a steel plate that I cut to size with my angle grinder (1/4-in.-thick plywood would also work for the mounting plate). I attached this plate to the saw's casting, using the same tapped holes that held the original port. On saws without a port, you'll have to drill and tap a couple holes in the casting.

The shroud's angled top allows the table to tilt. I sawed the back plywood face to match the profile of the saw. I left the front face as wide as possible. It actually extends inside the door and is cut to fit around the wheel.

I cut a 4-in.-dia. hole in the back face and installed the sheet-metal duct. Then I attached the faces together with a length of 22-gauge galvanized sheet metal. The lip at the bottom helps keep sawdust in the shroud.

Once the shroud was mounted, I marked and cut the saw's lower door, so it would close. I was reluctant to alter my saw by cutting the door, but I'm glad I did. This shroud makes bandsawing much cleaner and more enjoyable.

David Olson



The intake port is about the same size as the hose port, so it doesn't restrict the flow of air to my dust collector.

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If you like working with wood, you'll love this 24-Pc. Router Bit Set! All bits have a 1/4" shank, are solid carbide or carbide tipped for years of dependable use and have a razor sharp edge for smooth, accurate results. Set comes in a protective wood case.
Compare At: \$329.00

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**Level It Like A Seasoned Pro With
This Tradesman's Quality 360 Degree
Automatic Rotating Laser Level!**

This powerful tool has a rotating Class IIIA laser! Simply mount it to the tripod or place on a table and flip it on. It automatically rotates at speeds of 600 RPM for outside use and 150 RPM for indoors to create a constant level line. You can use it in a fixed position too. Features 100' range in fixed position, 40' in rotating. Tripod, case and batteries not included. Approx. 19-3/4" x 4-3/4" x 11-3/4".
Mfr. Sugg. Retail: \$299.99

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- ✓ Fencing
- ✓ Suspended Ceilings
- ✓ Wainscoting
- ✓ More!

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WAS: \$69.99 **NOW ONLY! \$59.99**
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**The Most Powerful Handheld
Flashlight We've Ever Sold!
See The Beam Up To
Two Miles Away!**

A must for ...

- ✓ Camping
- ✓ Backpacking
- ✓ Boating
- ✓ Power outages
- ✓ More!

Mfr. Sugg. Retail: \$39.99
**ONE MILLION
CANDLEPOWER**
Item No. UA26-98241

\$29.99 FREE Ship \$7.50

Put the power of one million candles in the palm of your hand! This Flashlight offers the power, dependability & durability you demand. Features advanced Xenon bulbs that are visible for up to two miles, a rugged aluminum housing that stands up to hard knocks & a compact lightweight design that won't bog you down. Rubber button turns the light on & off with just a touch. Twist end cap for continuous light. Measures 5-1/4"L. Longlife Lithium batteries included. 1-yr. Ltd. Warr.

**At Last! A Chain Saw That Requires No Costly
Gas, Or Cumbersome Electric Cords!**



Tornado Tools 18V Cordless Chain Saw offers unparalleled convenience without compromising performance! This Cordless Chain Saw will get the job done quickly and safely. Its 18V motor and rechargeable NiCad battery power the chain at 465 FPM to zip through branches with amazing ease. Also has double safety switch to help prevent accidents, guidebar and a lightweight outdoor tough design that weighs just 10lbs. Battery charger incl. 19" x 7" x 5".
Compare At: \$219.95
YOUR PRICE \$79.99 \$3.95 Ship \$7.50
Item No. UA26-36034

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Longer Than Any Bit You've**

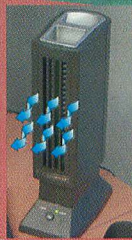
Mfr. Sugg. Retail: \$79.00
WAS: \$29.99

NOW ONLY \$29.99

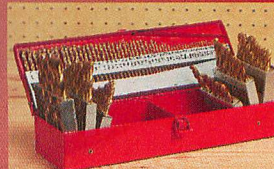
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DADO SCALE FOR LEFT-TILT SAWS

Installing a dado set on my left-tilt saw makes the scale on the rip fence unusable. Here's why: The cutters stack



START HERE

FOR A GREAT FINISH.



C4 carbide teeth are precision ground for an exceptionally smooth finish



Ultra-sharp cutting edges dramatically reduce splintering and tear-out



Heavy-gauge plates are laser cut and precision balanced for accurate cuts and tight joints



Available in several sizes for any woodworking application

INTRODUCING NEW WOODWORKING SAW BLADES FROM DeWALT®

You put a lot into your work. After all, it takes countless hours to complete the perfect project. And when you have the right tools and the right wood, you need the right saw blade. One that's precision balanced for highly accurate cuts. With large, micro-grain carbide teeth for exceptionally smooth finishes. Ultra-sharp cutting edges to reduce splintering. And one that comes in a variety of tooth counts and configurations. DeWALT® Woodworking Blades. We put more into them, so you can get more out of them.

For more information, call 1-800-4-DeWALT or visit our web site at www.DeWALT.com

©2003 DeWALT. The following are examples of trademarks for one or more DeWALT Power Tools and Accessories: The yellow and black color scheme; the "D"-shaped air intake grill; the array of pyramids on the handgrip; the kit box configuration; and the array of lozenge-shaped humps on the surface of the tool.

DeWALT

from left to right, toward the fence, so each cutter I add knocks the scale off by the width of the cutter.

Fortunately, recalibrating the scale is easy. After installing my dado set and checking it to see that it cuts the width I want, I unplug the saw and lock the fence in place next to the blade. Then I place a piece of tape on the scale's zero mark. The edge of the tape is the new cursor line. Now I can use the scale for dado cuts without altering its regular setting.

Mark Nagel

Fall Special
Our lowest price ever of only **\$49.95!***

A floor lamp that spreads sunshine all over a room and pays for itself!

The Balanced Spectrum® floor lamp combines the benefits of natural daylight indoors with an energy savings of \$51 over the life of one bulb!

Ever since the first human went into a dark cave and built a fire, people have realized the importance of proper indoor lighting. Unfortunately, since Edison invented the light bulb, lighting technology has remained relatively prehistoric. Modern light fixtures do little to combat many symptoms of improper lighting, such as eyestrain, dryness or burning. As more and more of us spend longer hours in front of a computer monitor, the results are compounded. And the effects of indoor lighting are not necessarily limited to physical well being. Many people believe that the quantity and quality of light can play a part in one's mood and work performance. Now, there's a better way to bring the positive benefits of natural sunlight indoors.

Use the Balanced Spectrum® floor lamp...



...for reading...



...at work...



...and when you need a source of natural light for close-up tasks.

Its 27-watt compact bulb is the equivalent to a 150-watt ordinary light bulb. This makes it perfect for activities such as reading, writing, sewing, needlepoint, and especially for aging eyes.

The Balanced Spectrum® floor lamp will change the way you see and feel about your living or work spaces. Studies show that sunshine can lift your mood and your energy levels, but as we all know the sun, unfortunately, does not always shine. So to bring the benefits of natural daylight indoors, use the floor lamp that simulates the full spectrum of daylight. You will see with more clarity and enjoyment as this lamp provides sharp visibility for close tasks and reduces eyestrain.

SAVE \$51 in energy cost over the life of one Balanced Spectrum® bulb!

A 150 watt incandescent bulb uses \$0.013 per kilowatt hour in energy cost. The Balanced Spectrum® bulb uses an average of **70% less energy** which saves you \$0.009/kWh. Based on 5,000 hours bulb life, the Balanced Spectrum® bulb will save **\$46** in energy cost. Plus, because the Balanced Spectrum® bulb lasts 10 times longer than an incandescent bulb priced at an average of \$0.50, an additional **\$5** savings is realized.

*Source: "Lighting the Way to Energy Savings"; 1999

What's the difference with Balanced Spectrum®?

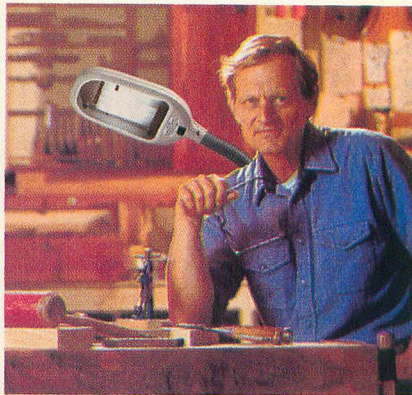
The value of a light source is measured by how well it renders all colors of the visible spectrum without bias. The Color Rendering Index (CRI) is measured on a scale of 1-100. The bulb used in the Balanced Spectrum® lamp is an exceptional light source with a CRI of 84. This will provide better vision and energy savings through a full spectrum of light with a brighter bluish tint versus the same area lit by lighting with more of an orange or reddish tint.

Height as shown: 50"

We've looked at lots of lights, but this one offered the benefit of dual light levels of 27 and 18 watts of power equivalent to 150 and 100-watt incandescent bulbs. This lamp has a flexible gooseneck design for maximum efficiency, with an "Instant On" switch that is flicker-free. The high-tech electronics, user-friendly design, and bulb that lasts ten times longer than an ordinary bulb make this product a must-have.

Try the Balanced Spectrum® floor lamp now at it's lowest price of less than \$50 after mail-in rebate! Now

Add sunshine to every room of your house at this new fantastic price!



The Balanced Spectrum® floor lamp will change the way you see and feel about your living or work spaces.

This light can change the way you live and work

As a commercial photographer, I probably give more attention to lighting than most people and therefore was impressed with the smooth, soft daylight quality of your lamp.

Dennis M.
Richmond, VA

I sit in my comfortable chair after my husband has gone to bed, and I turn that lamp on. It makes it so nice because it's like daylight over my chair...I don't get sore eyes like I used to.

Grace A.
Results may vary. Margate, FL



Technology revolutionizes the light bulb

- 5,000 hours bulb life
- Energy efficient
- Shows true colors

more than ever is the time to add sunshine to every room in your house at this fantastic low price! The Balanced Spectrum® floor lamp comes with a one-year manufacturer's limited warranty and firstSTREET's exclusive guarantee. Try this product for 90 days and return it for the product purchase price if not completely satisfied.

Balanced Spectrum® floor lamp
Item# ZL-3589 was **\$59.95**

***Save \$10** with mail-in rebate
Only \$49.95 + S&H after rebate
Please mention promotional code 28452.
For fastest service, call toll-free 24 hours a day

866-237-2688

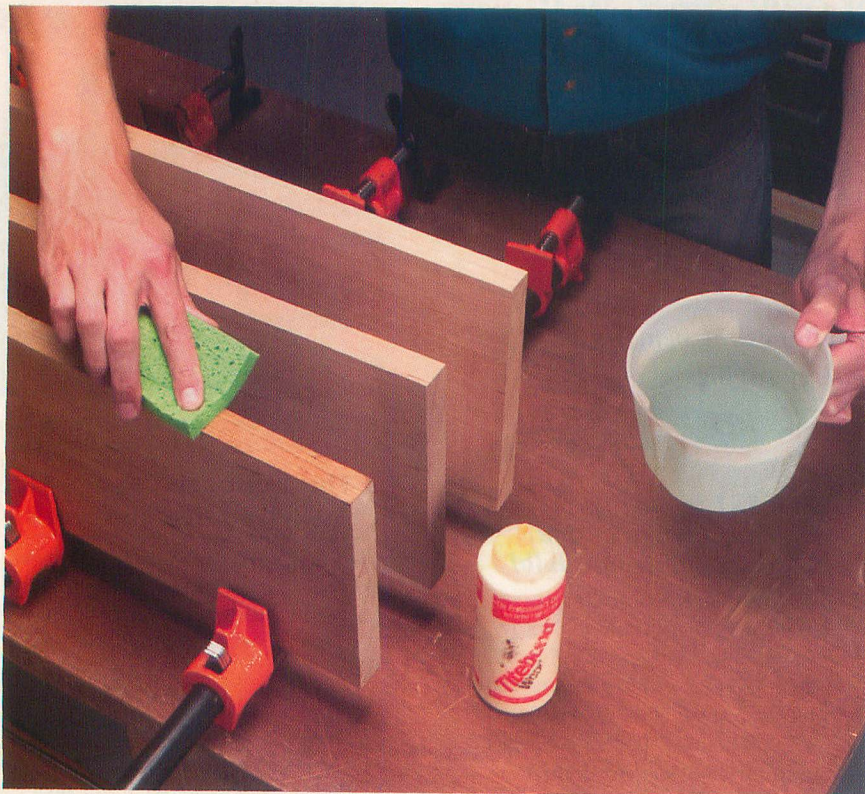


To order by mail, please call for details.
www.balancedspectrum.com

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Colonial Heights, VA 23834

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EXTEND WORKING TIME FOR GLUE-UPS

When it's hot, or when I'm gluing a complex assembly, yellow glue is hard to use, because it sets up too fast.

To slow the drying, I just dampen the wood before I apply the glue. I admit I didn't try this technique until I called a glue company for advice. The company rep said the joints will be plenty strong as long as I don't saturate the wood. A little water goes a long way! Even if the dampened wood appears dry by the time the glue is applied, enough moisture remains to keep the glue moist.

Brett Waldrop



SK-250TS-L series YOU DESERVE MORE ...

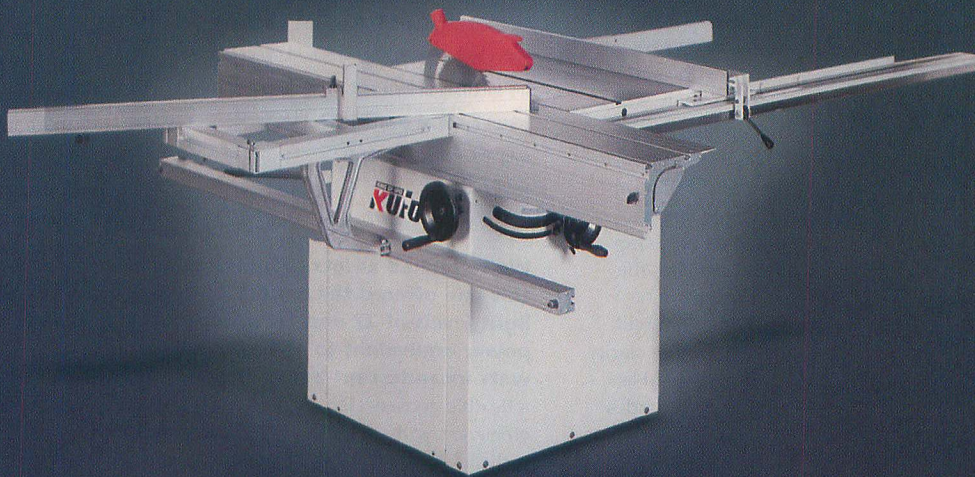
KUFU table saw model SK-250TS-L comes with professional features built-in.



10" tilting arbor blade and 3-1/2" scoring sawblade keep tearout to a minimum.

52" Precision rip fence system standard, cross cuts up to 48" available. Precision auxiliary fences stop with lens magnifier is easy to adjust.

Powerfull 3HP motor with built-in blade brake helps eliminate the dangers of kick back.



For detail information, visit your local dealer or check our website at www.kufogroup.com
Request a free full-line catalog, please call 1888-558-4628, e-mail: kufoseco@kufogroup.com

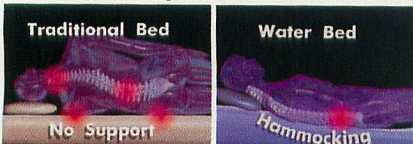
You look better...and you feel better... when you Sleep Better™

The Memory Foam Ultra mattress topper is cut into a grid pattern combining six different zones for variable support and a better night's sleep.

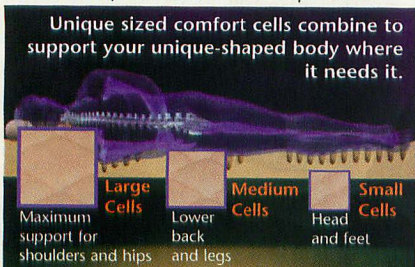
It's 3 a.m. You have exactly two hours until you have to get up for work, and you still can't seem to fall asleep. At this point, the phrase "tossing and turning" begins to take on a whole new meaning for people whose mattresses simply aren't giving proper support anymore. Your mattress may dictate your quality of sleep. Even if you merely suspect that your mattress may be outdated, that's when you need to take action. Some mattresses fail to support your spine properly, which can result in increased pressure on certain parts of your body. Other mattresses, sporting certain degrees of visco-elastic foam, can sometimes cost you well over \$1000. Now, one of the world's leading manufacturers of foam products has developed an incredibly affordable mattress topper that can actually change the way you sleep. Introducing the future of a better night's sleep: The Memory Foam Ultra mattress topper.

Sleep Better™...Wake up to a better morning. The Memory Foam Ultra mattress topper is designed to give you a better sleep surface. Not only does it support each region of your body, but it's also temperature sensitive. With its various-sized "comfort cells," the 2-inch thick Memory Foam Ultra mattress topper combines six zones to support specific

What could be wrong with your present bed?



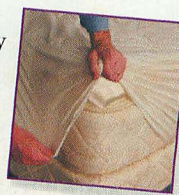
The ideal position is a neutral body posture in which the different parts of the human body are supported individually and evenly. This is the secret behind Memory Foam Ultra, the mattress topper that turns any bed into the ideal sleep surface.



body area weight, which promotes a better night's sleep. The largest cells support your lower back and mid-section, while the medium-sized cells support the shoulders, lower back and legs. The smallest cells support your head and feet. Combined, these zones provide variable support from head to toe. By using visco-elastic foam, the Memory Foam Ultra mattress topper also molds to your body contours to help prevent tossing and turning during the night. When you lie down on this amazing material, the heat and pressure sensitive foam reacts to your body's weight and temperature, so that it molds to your exact body shape. This means that whether you sleep on your back, stomach or side, your weight is evenly distributed and your spine remains in a neutral position. Other surfaces support your body at the shoulders, hips and legs only. This causes your spine to sag in other areas, which can often result in discomfort, and even back pain. You'll wake up rested, relaxed and ready to take on the day. Anyone who suffers from insomnia and back pain due to mattress discomfort can benefit from this technology.

FREE heavyweight mattress pad included.

Included with the Memory Foam Ultra mattress topper is a fitted mattress pad. It's heavyweight and quilted, and made of 200-count 100% cotton with a 14-inch deep stretchable skirt to fit a mattress up to 21 inches thick. The size



The 2-inch thick temperature-smart foam adjusts to your shape.



of the mattress pad is determined by the size mattress topper you order.

Try it for yourself today! The

Memory Foam Ultra mattress topper can change the way you sleep. Promote proper spine positioning, while enjoying relief from insomnia and back pain with this full-body support. It comes with a 5-year manufacturer's limited warranty and firstSTREET's exclusive in-home trial. If you are not completely satisfied, simply return it within 90 days for the product purchase price.

Memory Foam Ultra Mattress Topper:

Item# 2P-2870

Sizes Twin through California King*

Prices starting as low as \$... 2 payments of \$49.95 each + S&H

FREE mattress pad—a \$59.95 value!

Please mention promotional code 28453.

For fastest service, call toll-free 24 hours a day

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*For mail-in orders, please call for individual cost of the various sizes along with shipping and handling. To charge it to your credit card, enclose your account number and expiration date.

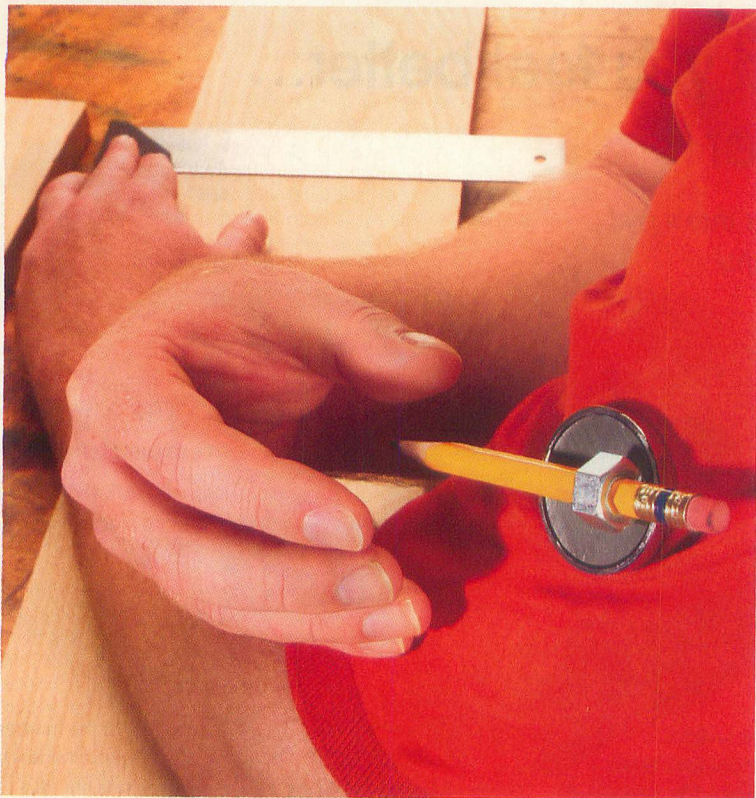
Virginia residents only—please include 4.5% sales tax.

For quick and easy online ordering of your Memory Foam Ultra, go to www.memoryfoamtopper.com

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Colonial Heights, VA 23834

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MAGNETIC PENCIL HOLDER

I used to have trouble hanging onto my pencil, but now it's always at arm's length. I simply place magnets on each side of my shirtsleeve and twist a nut onto my pencil (if the nut's too large, I wrap tape around the pencil shaft).

My shirtsleeve magnets are also great for keeping a couple of nails or screws handy during assembly or for work around the house. I admit it looks kind of goofy, but at least nobody can accuse me of having a screw loose!

Lorne Davidoff

If you have an original Workshop Tip, send it to us with a sketch or photo. If we print it, you'll get \$100! Send to: Workshop Tips, American Woodworker, 2915 Commers Drive, Suite 700, Eagan, MN 55121 or e-mail to workshoptips@readersdigest.com. Submissions can't be returned and become our property upon acceptance and payment. We may edit submissions, and use them in all print and electronic media.

MIKE KRIVIT

"...dovetail one, or a hundred drawers – perfect every time."

– Norm Abram,
New Yankee Workshop

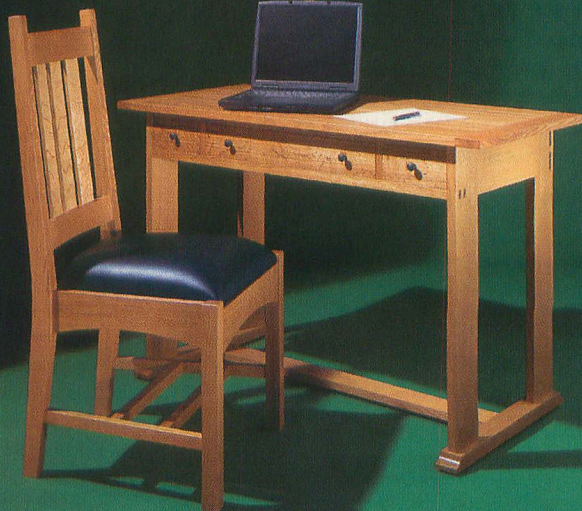
Dovetail Joints

Mortise & Tenons

Made Easy

"...I know of no better or faster way to cut mortise and tenons..."

– Christopher Schwarz,
Popular Woodworking Magazine



D4



No other jigs offer such versatility, precision and superb value for both the hobbyist or professional. The D4 Dovetail Jig routs through and half-blind dovetails up to 24" wide in boards up to 1 1/2" thick, with infinitely variable spacing of pins and tails – all on one jig. Plus it routs sliding and angled dovetails, decorative Isoloc joints, finger joints, and multiple mortise and tenons. And the new FMT Frame Mortise and Tenon Jig makes strong mortise and tenons simple. Joinery's never been easier.

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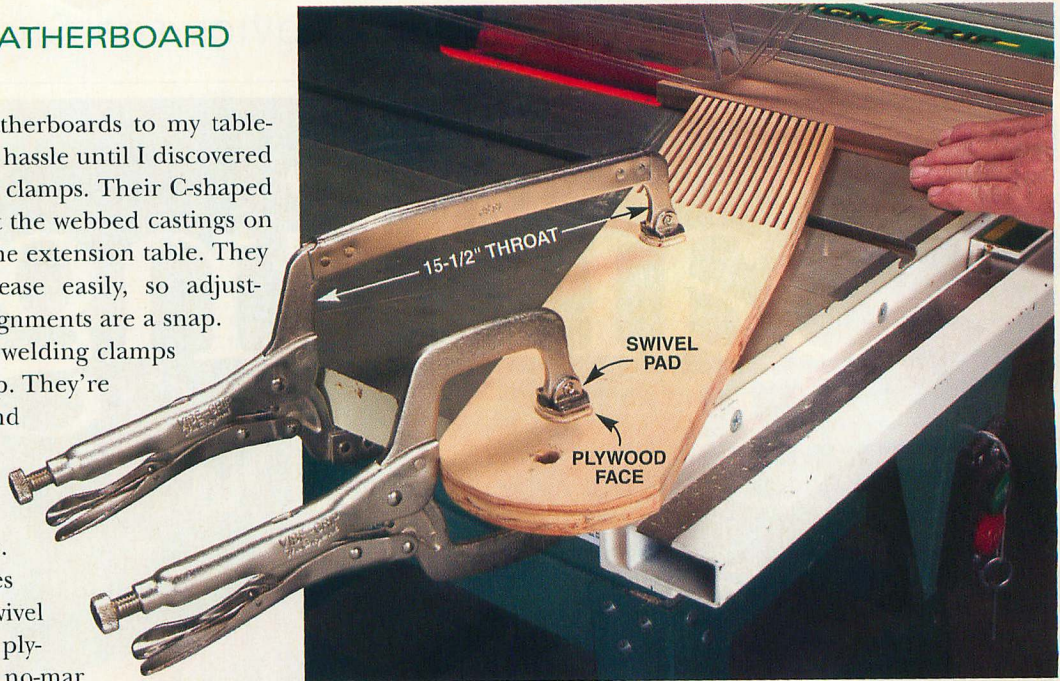


QUICK FEATHERBOARD CLAMP

Clamping featherboards to my table-saw was always a hassle until I discovered locking welding clamps. Their C-shaped jaws adjust to fit the webbed castings on the bottom of the extension table. They clamp and release easily, so adjustments and realignments are a snap.

I use locking welding clamps all over my shop. They're much lighter and easier to use than long-reach wood-working clamps. Be sure the ones you buy have swivel pads. I glue on plywood faces, for no-mar clamping. **AW**

Bob Newman




Source

Seven Corners Hardware
(651) 224-4859, www.7corners.com
Vise-Grip locking clamps w/swivel pads

9SP, 4-3/4-in. throat depth, \$20
18SP, 9-1/2-in. throat depth, \$30
24SP, 15-1/2-in. throat depth, \$38.


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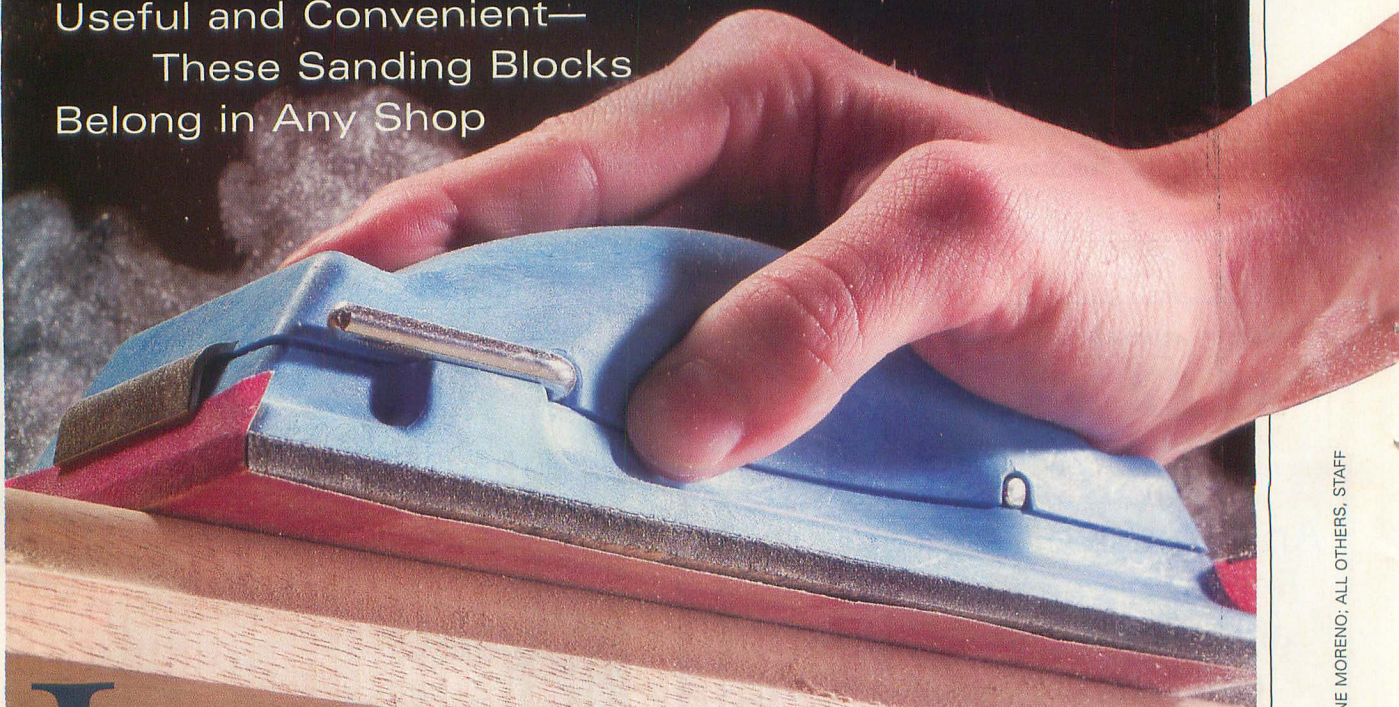


Circle No. 175

edited by Dave Munnkittrick

Hand Sanding BLOCKS

Useful and Convenient—
These Sanding Blocks
Belong in Any Shop



Isaac Fischer, Jr., of Springfield, Vt., patented sandpaper on June 14, 1834. Shortly after that, presumably, sanding blocks were invented. Sanding blocks apply even pressure over the entire surface of the paper. This makes sanding by hand faster and more efficient.

Today, power sanders take a lot of the time and drudgery out of sanding. Even so, nearly every project benefits from a little hand sanding. I power-sand as much as possible, of course, but I always

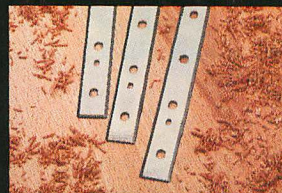
finish with hand sanding to remove the tiny cross-grain scratches that power sanders leave behind. This little bit of hand sanding is one secret to a good finish. Hand sanding is also a must on molding profiles or any detail that a power sander either can't reach or would ruin.

I've tried every commercial sanding block I could get my hands on. In the end, I've found several blocks that I'd recommend for any shop. I use two very basic criteria for making my picks.

First, the block should be comfortable. This keeps fatigue to a minimum during big sanding jobs. Second, changing grits should be quick, occur easily and waste little or no precious paper.

Sanding blocks fall into four categories based on the paper each holds: plain-paper, pressure-sensitive-adhesive or hook-and-loop, sanding belt and specialized blocks for specific sanding chores.

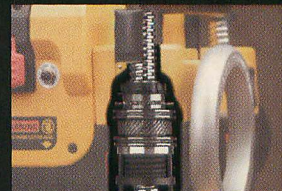
THREE KNIVES. TWO SPEEDS. ONE GREAT FINISH.



Three knife cutter-head provides 30% longer knife life than traditional two knife cutter-heads.



A two speed gear box allows users to choose between 96 and 179 cuts per inch.



An automatic carriage lock is built into the four posts to minimize the movement that causes snipe.



A fan-assisted chip ejection system picks up debris and exhausts it from the unit.

TWO SPEEDS AND THREE KNIVES ON THE DEWALT DW735 DELIVER THE ULTIMATE SURFACE FINISH.

The DW735 13" thickness planer from DEWALT revolutionizes surface finish through a one-of-a-kind three knife cutter-head, two-speed gear box combination. It offers the ultimate in finish quality — even on hard to plane figured woods — by offering the most cuts per inch available on any benchtop thickness planer. A fan-assisted chip ejection system aids in the removal of debris and prevents excess chips from marring material. The unique automatic carriage lock minimizes the movement that causes snipe without having to engage a lever before and after each pass. The solid 19-3/4" cast aluminum base provides twice the rigidity of traditional material support systems that utilize folding tables. The DW735 is a must for the serious woodworker. It takes planing to a whole new level.

For more information, call **1-800-4-DEWALT** or visit our web site at www.DEWALT.com/planers

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CIRCLE NO. 9

DEWALT

PLAIN-PAPER SANDING BLOCKS

The best thing about these blocks is that they use ordinary sheet paper that costs a lot less than belts or self-stick pressure-sensitive-adhesive or hook-and-loop paper.

They also allow you to use specialized paper, like wet-dry paper, that's available only in plain-backed paper. They require cutting the full sheets of sandpaper into one-half, one-quarter, one-third or one-sixth sheets, which can be a bit of a pain. I prefer the quarter-sheet blocks. That size fits nicely in the hand and it's easy to divide the paper into quarters.



RECOMMENDATION

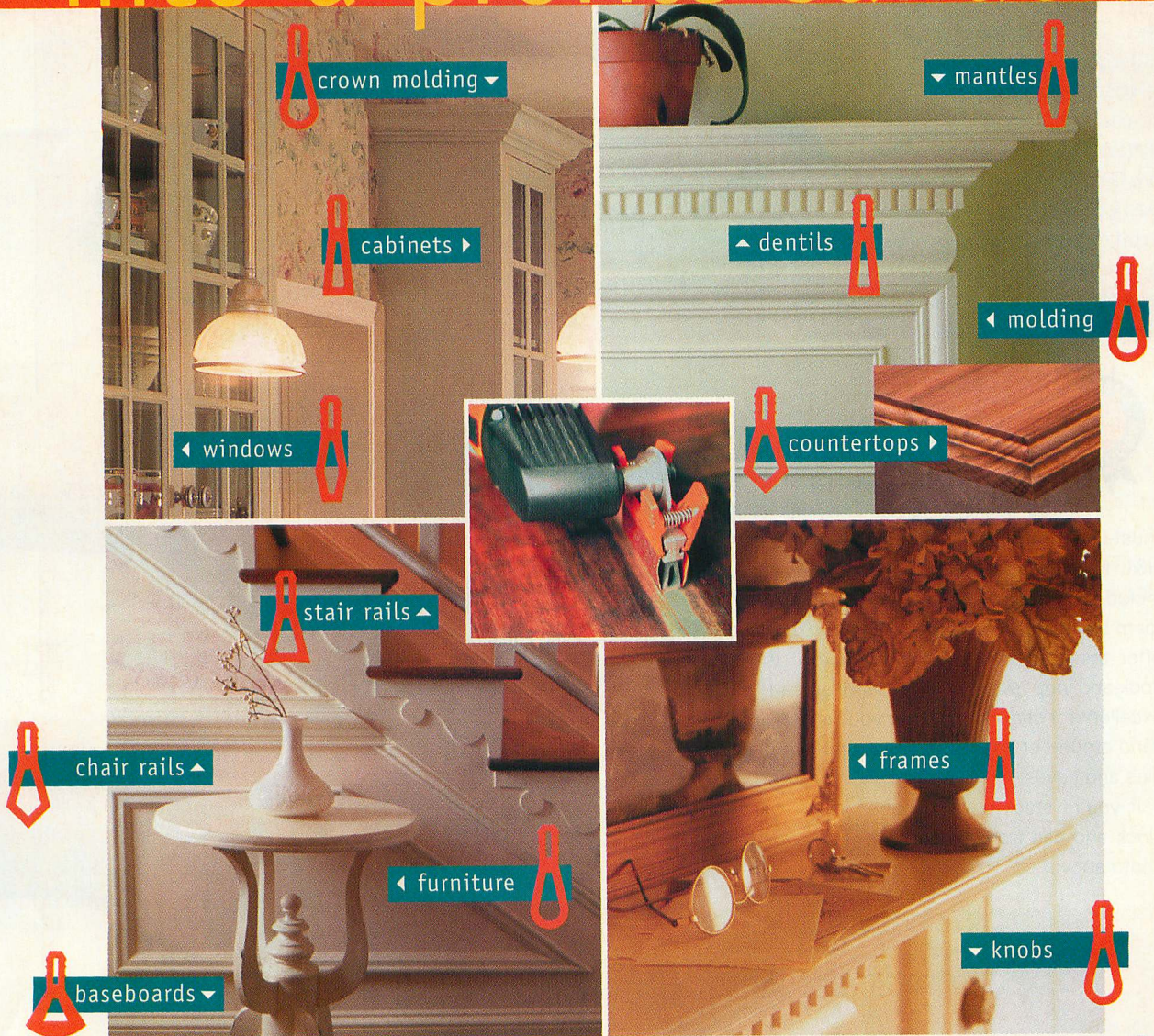
The Preppin' Weapon (\$20) is well-designed and made in the United States of durable, high-impact ABS plastic. The contoured shape is comfortable whether you're sanding one-handed or bearing down with two.

Easy-to-use lever-action clips make paper changes a snap. The clips use very little sandpaper to grip and they pull the paper tight. Plus, the block can hold as many as four sheets of abrasive at once. Just tear off each sheet as it wears out. Other features I like include tapered edges that allow the block to get right into corners and a tough rubber pad that's firm, not mushy.

The Preppin' Weapon is designed for either wet or dry use. Its styrofoam core keeps the block floating in a bucket of water and the stainless steel clip mechanism will never corrode.

Source Time-Shaver Tools Inc., (877) 763-3729, www.timeshavertools.com
Preppin' Weapon, available in red, yellow, green and blue, 2-3/4 x 7-3/4 in., \$20 plus \$3.50 shipping.

Turn your MultiMaster into a profile sander.



Congratulations. Your MultiMaster just became a profile sander. Not just a profile sander, the very best profile sander available anywhere. And you thought the MultiMaster was already the most versatile power tool you could own.

The FEIN MultiMaster Profile Sanding kit far outperforms any of the "dedicated" profile sanders now on the market. It sands 300 to 500% times faster, with no vibration to hurt your wrist or mar the finish.

The FEIN MultiMaster Profile Sanding kit contains a holder, six inserts that mold to form fit your profile, and 5 sheets each of 80, 120 and 180 grit sandpaper. It fits every MultiMaster ever made. See it at your favorite dealer mid-August. What a great add-on!

Call **1-800-441-9878** for more details and a dealer near you, or visit us at www.feinus.com.



*Finishing
is just
the beginning*

Fein 

PRESSURE-SENSITIVE-ADHESIVE OR HOOK-AND-LOOP BLOCKS AND PADS

These blocks use either hook-and-loop (H&L) or pressure-sensitive-adhesive (PSA) sandpaper. The big advantage to this style of block is the speed and ease of grit change. Just peel off the old and stick on the new. I like hook-and-loop paper best because it can be taken on and off multiple times; in contrast, the self-stick never sticks as well the second time.



RECOMMENDATION

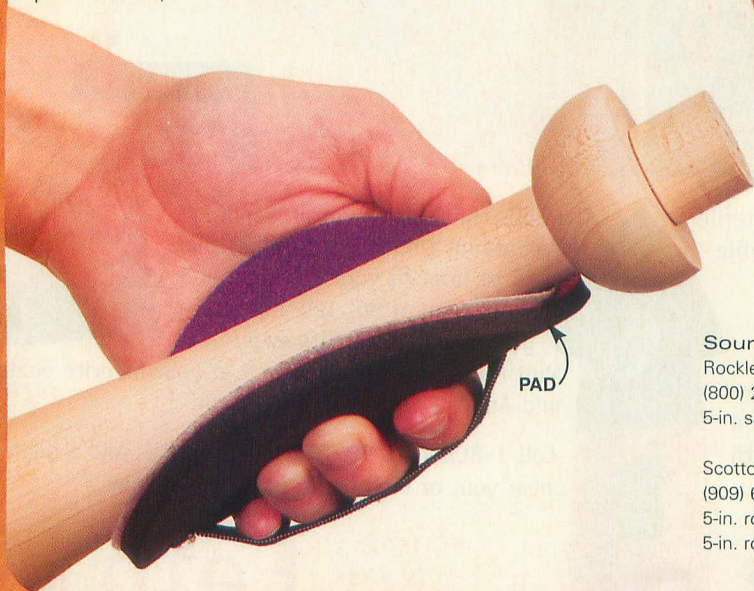
I like Rockler's Sanding Block and Pad package (\$15). This pair is a must-have for anyone who already owns an H&L random-orbit sander. The Rockler set includes a comfortable, wedge-shaped foam block plus a flexible sanding pad. Both offer the quick-change convenience of the hook-and-loop system. The sanding pad is excellent for shaping anything you can get your hand around or into, including round-overs, spindles and coves.

If you're stuck on PSA paper, check out the similar block and pad from Scotton Co. (see wooden block in photo above).

FOAM BLOCK



PAD



Sources

Rockler
(800) 279-4441, www.rockler.com
5-in. sanding block and pad, #26381, \$15.

Scotton Co.
(909) 674-6454, www.scottontool.com
5-in. round sanding block for PSA paper, #6035, \$9
5-in. round sanding pad, #6071, \$7.

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WMH TOOL GROUP, Inc.

SPECIALIZED SANDING BLOCKS

For people with specialized sanding needs, like carvers or boat builders, there's a host of specialized blocks. Here are some examples:

1. Contour Sanding Grips (see Editor's Choice, page 32).
2. The Flex Base from Scotton Co. (\$20) is just the ticket for boat builders or anyone who regularly sands curves. The company has models designed to hold plain, pressure-sensitive-adhesive or hook-and-loop paper.

Source

Scotton Co.

(909) 674-6454, www.scottontool.com

Flex Base with knobs for plain paper, 2-3/4 x 15-3/4 in., #6250, \$21.

3. The Vario Hand Profile Sander (\$30) is a shape changer. The base can conform itself to molding profiles to create an instant, custom sanding block. The Vario works fine on simple moldings, such as a cove or round-over, but I found it softened the crisp 90-degree details on more complex router moldings.

4. Paper changes are awkward on these plain-paper contour sanding blocks.

5. Sanding Sticks are good for tight spaces, like those on a carving. The belts must be special-ordered from the manufacturer.

6. The Hook & Loop Hand File is used like a file. H&L strips make grit changes a breeze. The file is flexible enough to conform to a gentle curve.

Continued on page 32

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If you use standard light bulbs, the lighting in your home leaves you in the "dark ages". Standard incandescent bulbs and traditional fluorescent bulbs do not provide the white light necessary for many of your favorite indoor activities. Reading, sewing, and crafts require you to see details and accurate colors. And as we age, our eyes need more light to focus clearly. But your current bulbs, which emit yellowish or greenish light, leave your eyes tired and

strained. Well, we looked to the sun for inspiration and developed the SunWhite lamp. And we priced it much lower than all of the other "daylight" lamps on the market. You can now bring the sun indoors for about half the price that you'd expect.

How did we do it. First we used a technologically advanced bulb that contains rare earth phosphors that emit a purer whiter light than conventional bulbs. These amaz-

ing bulbs produce about 1500 lumens in light output creating more light output than a standard 100 watt bulb from G.E.. And we do it efficiently with only 27 watts of power that allows you to pay for this lamp in electricity savings in about 2 years of regular use. To make the value even better, this bulb lasts for 5000 hours or more than twice as long as the best selling bulb. More lux...less bucks!

Finally we are offering such a low price because our factory boss wants to be the leader in this new technology. He's invested millions in factory machinery to be the most efficient manufacturer of daylight spectrum lighting. He believes that our SunWhite technology will overwhelm the current lightbulb business and he wants to be the leader in "sunlighting". So don't get ripped off by paying \$99-\$159 for "sunlighting" technology.

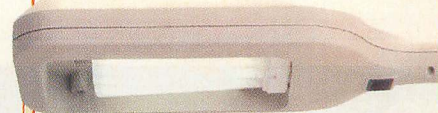
We are so sure that you will love this lamp that we are offering a 60 day

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Continued from page 30

Source

Klingspor

(800) 228-0000

www.woodworkingshop.com

Vario Hand Profile Sander, #VA20000, \$42

Curv-A-Flex Hand Sander, #KL05205, \$7

Teardrop Hand Sander, #KL05235, \$7.

Sanding Sticks:

1/4 x 6 in., #LS25000, set of three, \$8

1/2 x 6 in., #LS45000, set of three, \$10

3/4 x 6 in., #LS65000, set of three, \$12

Hook & Loop Hand File,

#HF15500, \$20.

7. Belt Sanding Blocks

The main advantage to this style is

its use of long-lasting 3- x 21-in. belts designed for power belt sanders.

Source

Hartville Tools

(800) 345-2396

www.hartvilletool.com

The Sand Devil, #37895, \$15.

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RECOMMENDATION

There's one set of specialized blocks I think any woodworker would find useful: little rubber "tadpole" sanding blocks. They come in a variety of shapes and are just the thing for sanding router-molding profiles. They can't be beat when you need to match some small profiles. Tadpole sanding blocks don't cost a lot and they'll save you from hunting for the right dowel size or having to make your own profiles.

AW

Source

Lee Valley

(800) 871-8158

www.leevalley.com

Set of 15 Contour Sanding Grips, #68282.10, \$10.

Circle No. 10



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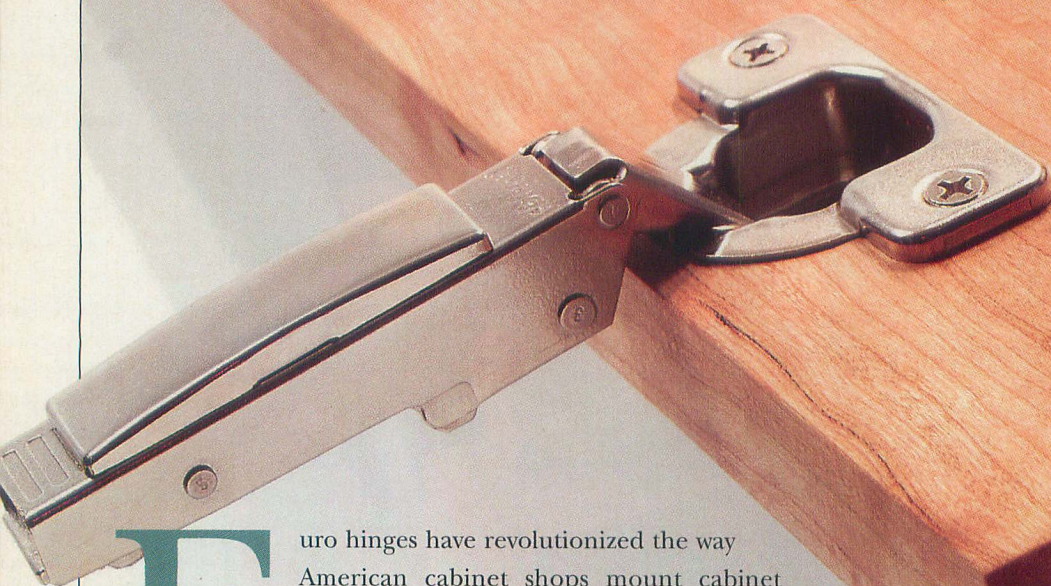
Powermatic, Performax and JET are a Family of Brands.

Circle No. 17

JET

Buying Euro Hinges

Confused by all the variations?
Here's how to find the hinges you need.



RAMON MORENO

Euro hinges have revolutionized the way American cabinet shops mount cabinet doors. Originally developed as part of the European frameless cabinetmaking system, Euro hinges work equally well in traditional face-frame cabinets. Also called concealed or cup hinges, these high-tech marvels offer several advantages over traditional hinges.

They're really easy to install. You simply drill holes and pop the hinges and mounting plates into place. Cabinet shops use sophisticated boring machines for production work, but all you really need is a drill press, a 1-3/8-in. flat-bottom boring bit (see Tool Tip, page 36) and a 3/32-in. twist bit.

They make doors mountable in seconds. You just snap Euro hinges into place. Removal's a snap, too.

You can dial in a perfect fit. Euro hinges have adjustment screws that allow you to move the doors up or

down, side to side, and front to back after they've been installed.

There's a Euro hinge for almost every door: Thick doors, bi-fold doors, glass doors, doors with narrow stiles or profiled edges. Self-closing hinges are most common, but free-swinging versions are also available.

They don't show. Euro hinges mount behind the doors and inside the cabinet, so they're hidden when the doors are closed.

They're cost-effective. Euro hinges cost more than traditional hinges, but they make installation go a lot faster.

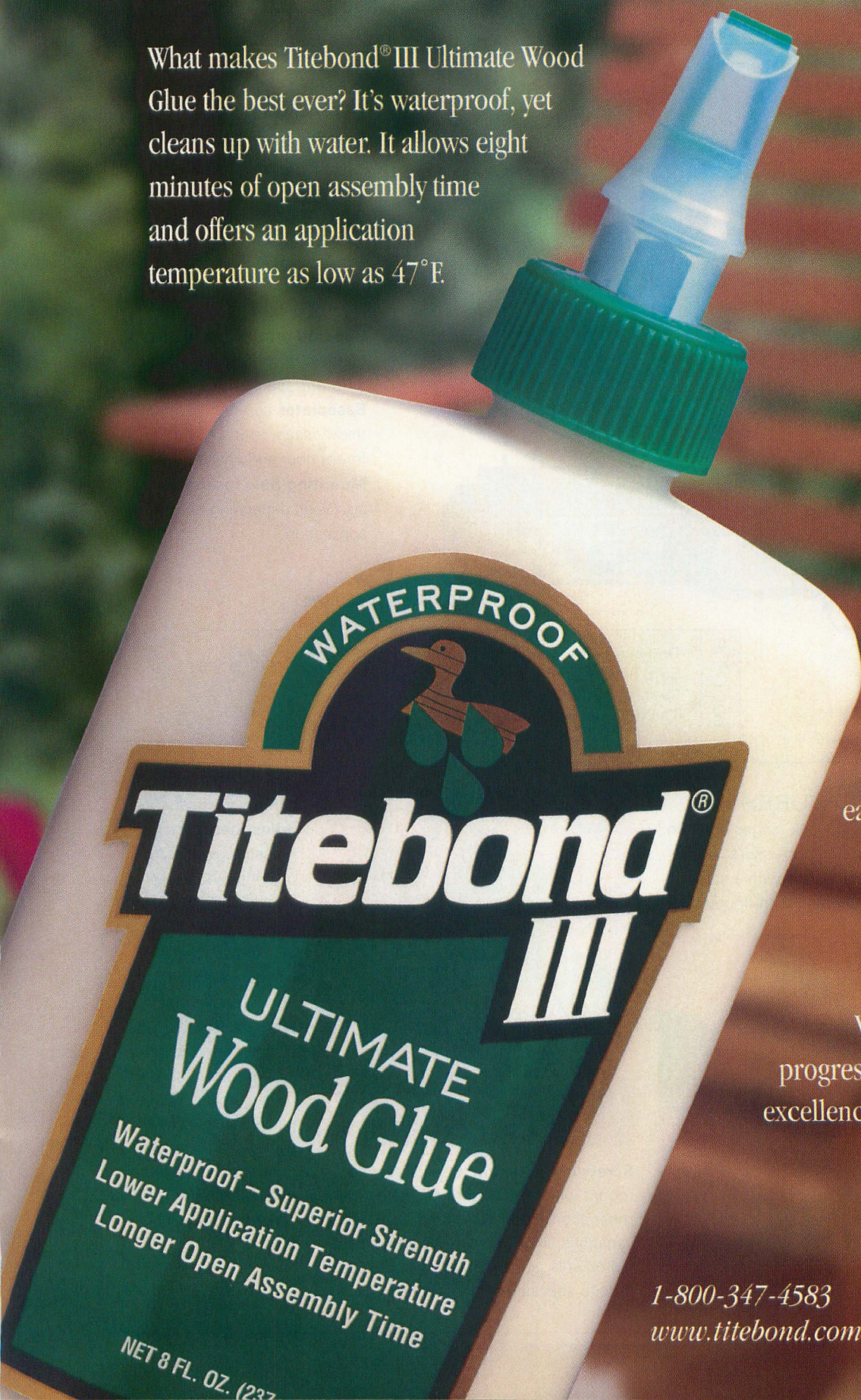
Some pro shops charge \$100 more per door to install traditional hinges.

If Euro hinges have a drawback, it's that there are so many variations it's hard to figure out which ones are right for your project.

Catalogs and Web sites commonly present diagrams and charts to help you choose. Unfortunately, they're almost always loaded with dimensions, unfamiliar terms and installation details that just make things worse. The fact is, you don't have to know a lot about Euro hinges to choose the right ones.

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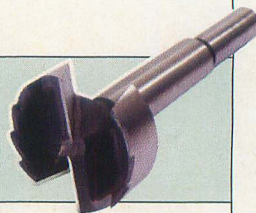
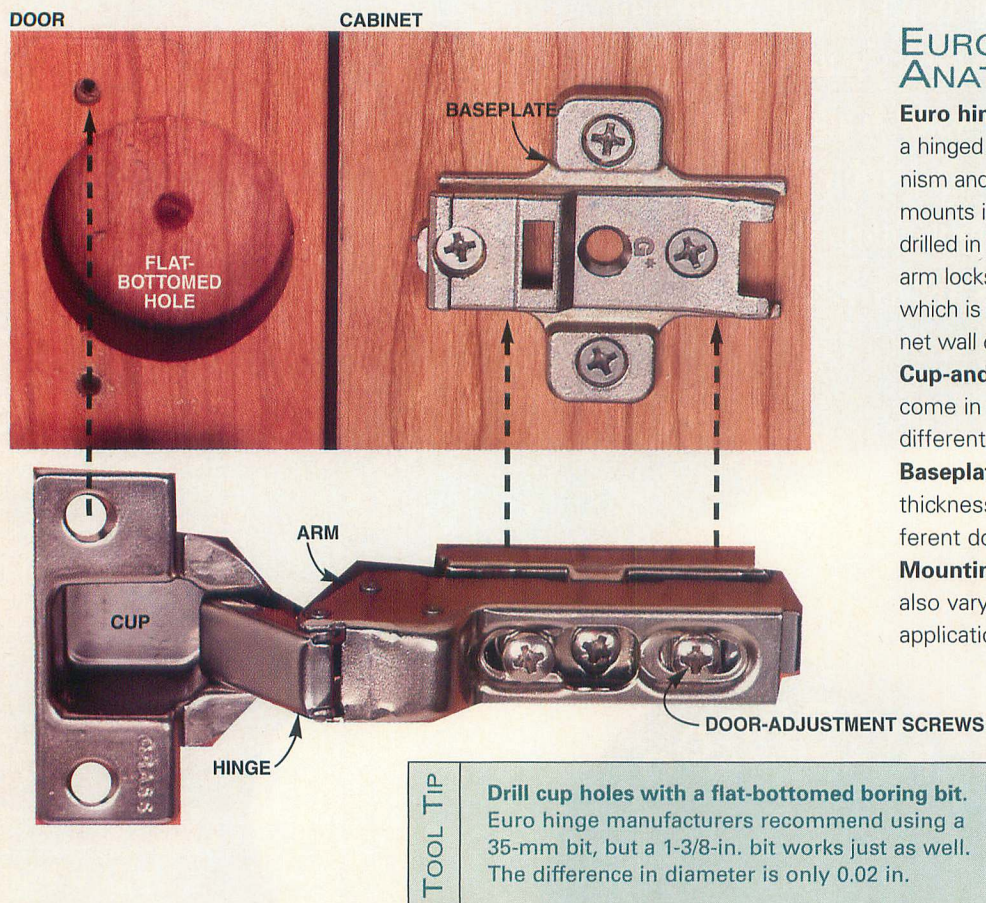


Plus it's vastly stronger, safer, easier to clean up and less expensive than polyurethane glues.

Titebond® III. We see it as a natural progression of tradition and excellence. You'll see it as the ultimate wood glue.

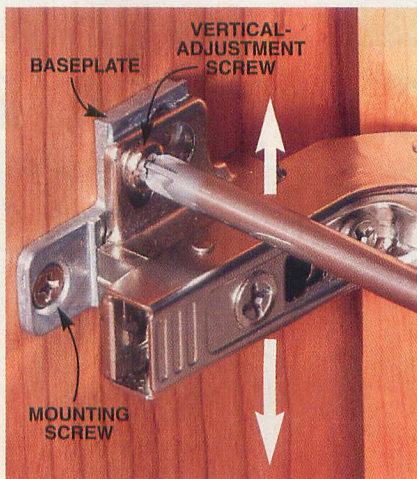
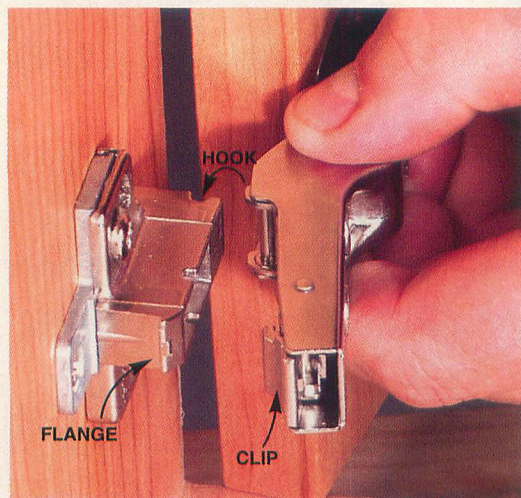
1-800-347-4583
www.titebond.com

EURO HINGE BASICS Euro hinges vary widely in appearance, but they all share the same basic two-part design and they're all installed the same way. The best Euro hinges are loaded with user-friendly features.



MUST-HAVE FEATURES

Snap-on attachment. Spring-lock hinges snap on and off the baseplate with finger pressure. Avoid hinges that clamp to the baseplate with a screw. They can work loose, leaving you with floppy doors.



Screw-on fastening. Baseplates that mount with regular flat head screws are most economical. All the other fastening variations, like Euro screws and expanding dowels, are aimed at pros. Some require special machinery to install.

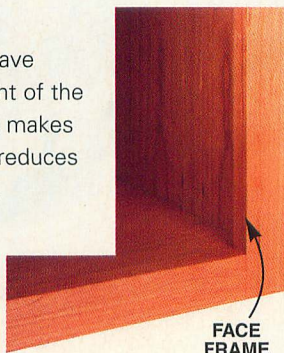
Simple vertical adjustment. The best hinges allow you to adjust the doors up and down without loosening the mounting screws. These hinges are easy to spot because their baseplates won't have elongated mounting screw holes. Some hinges employ two-part adjustable baseplates (see photo, left). Others locate all three door-adjustment screws on the hinge arm.

FIND THE RIGHT HINGES Knowing where you want to use Euro hinges and what you want them to do is most important. **Answering 3 simple questions** allows you to cut through all the choices and zero in on the right hinge and baseplate combination.

1.

WHAT STYLE ARE YOUR CABINETS?

Face-frame cabinets have frames glued to the front of the cabinet box. This frame makes the cabinet rigid, but it reduces the size of the opening.



Frameless cabinets are completely open, bordered only by the edges of the cabinet box. The glued-in back makes the cabinet rigid.



2.

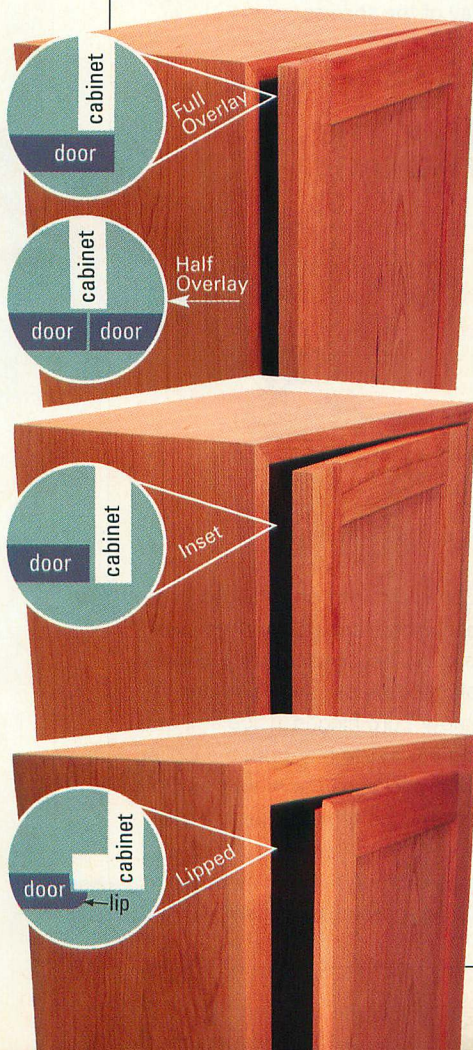
WHAT STYLE ARE YOUR DOORS?

Overlay doors mount in front of the cabinet or face frame. Doors with *full-overlay* hinges cover the 3/4-in.-wide edge of the frameless cabinet side. Doors with *half-overlay* hinges cover half of the 3/4-in.-wide edge. You can mount doors on both sides of a single 3/4-in.-wide partition by using half-overlay hinges.

Sometimes, overlay amounts are listed incrementally, ranging from 1/4 in. up to 1-3/8 in. This use of two types of terminology can be confusing: A half-overlay hinge, for example, is not the same as a hinge with a 1/2-in. overlay.

Inset doors mount inside the cabinet or face frame, flush with the front.

Lipped doors fit halfway inside the opening, because the back edge is rabbeted. When the door is closed, the lip covers the opening. Typically, lipped doors are mounted on face-frame cabinets with partially concealed hinges. Few Euro hinges are compatible with lipped doors.



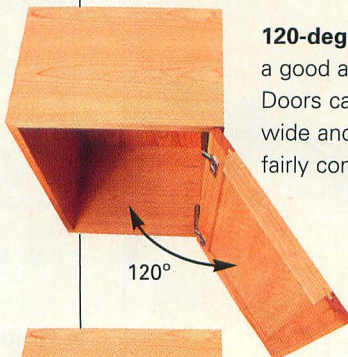
3.

HOW FAR DO YOU WANT THE DOOR TO OPEN?

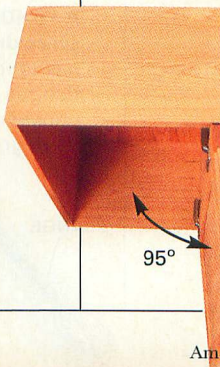
165-degree hinges swing the doors wide open, but they cost the most and they're huge.



120-degree hinges are a good all-purpose choice. Doors can swing fairly wide and the hinges are fairly compact.



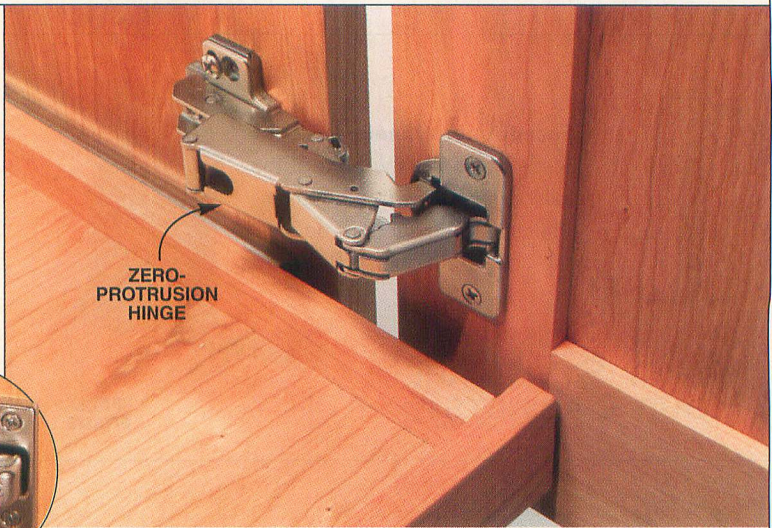
95-degree hinges take up the least cabinet space and are the most economical. However, doors that open only 95 degrees can get in the way when they're mounted on base cabinets.



MORE TIPS FOR BUYING AND USING EURO HINGES

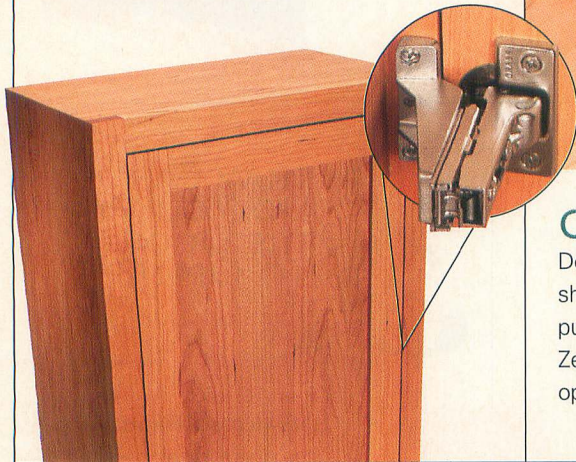
HIGH TECH FOR TRADITIONAL STYLE

Manufacturers have recently introduced Euro hinges for face-frame cabinets with inset doors. These hinges represent the ultimate merging of Euro design and traditional appearance. Now you can outfit a classic Shaker-style cupboard or Arts and Crafts bookcase with high-tech hinges.



CLEARANCE FOR PULL-OUT SHELVES

Doors mounted on standard Euro hinges interfere with pull-out shelves, because the doors swing inward as they open. Cabinets with pull-out shelves require doors with special zero-protrusion hinges. Zero-protrusion hinges keep the doors from protruding into the cabinet opening, so the doors aren't in the way of the shelves.



USE THE RIGHT DRIVER

Euro-hinge adjustment screws have PoziDrive heads. You can use a Phillips screwdriver on these screws, but a PoziDrive screwdriver works so much better that it's worth having if you're installing more than a few Euro hinges.

Source
Woodworker's Hardware
(800) 383-0130
www.wwhardware.com
#2 Pozi Screwdriver,
B POZI, \$4.

A PoziDrive screwdriver has tapered flanges between its 90-degree tips.

FLANGE

Corner tick marks distinguish PoziDrive screws from Phillips screws.

TICK MARK



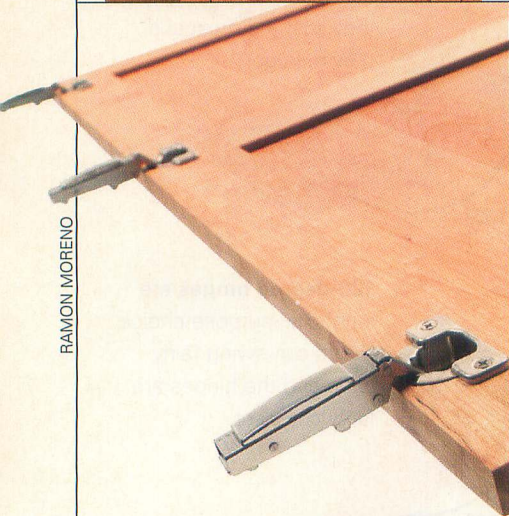
BUY THE PACKAGE

Some catalogs offer hinges and backplates separately. This gives professional cabinet-shop buyers all the options. But if you don't know Euro hinges inside and out, it's easiest to buy from a supplier who packages the hinges and baseplates together for specific applications, such as a "frameless cabinet, full-overlay door, 120-degree opening." **AW**



USE THREE HINGES FOR BIG DOORS

Any door taller than 40 in. or wider than 24 in. requires three or more Euro hinges. Suppliers have charts to determine the exact number you'll need.



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sure to find exactly the right stain color.

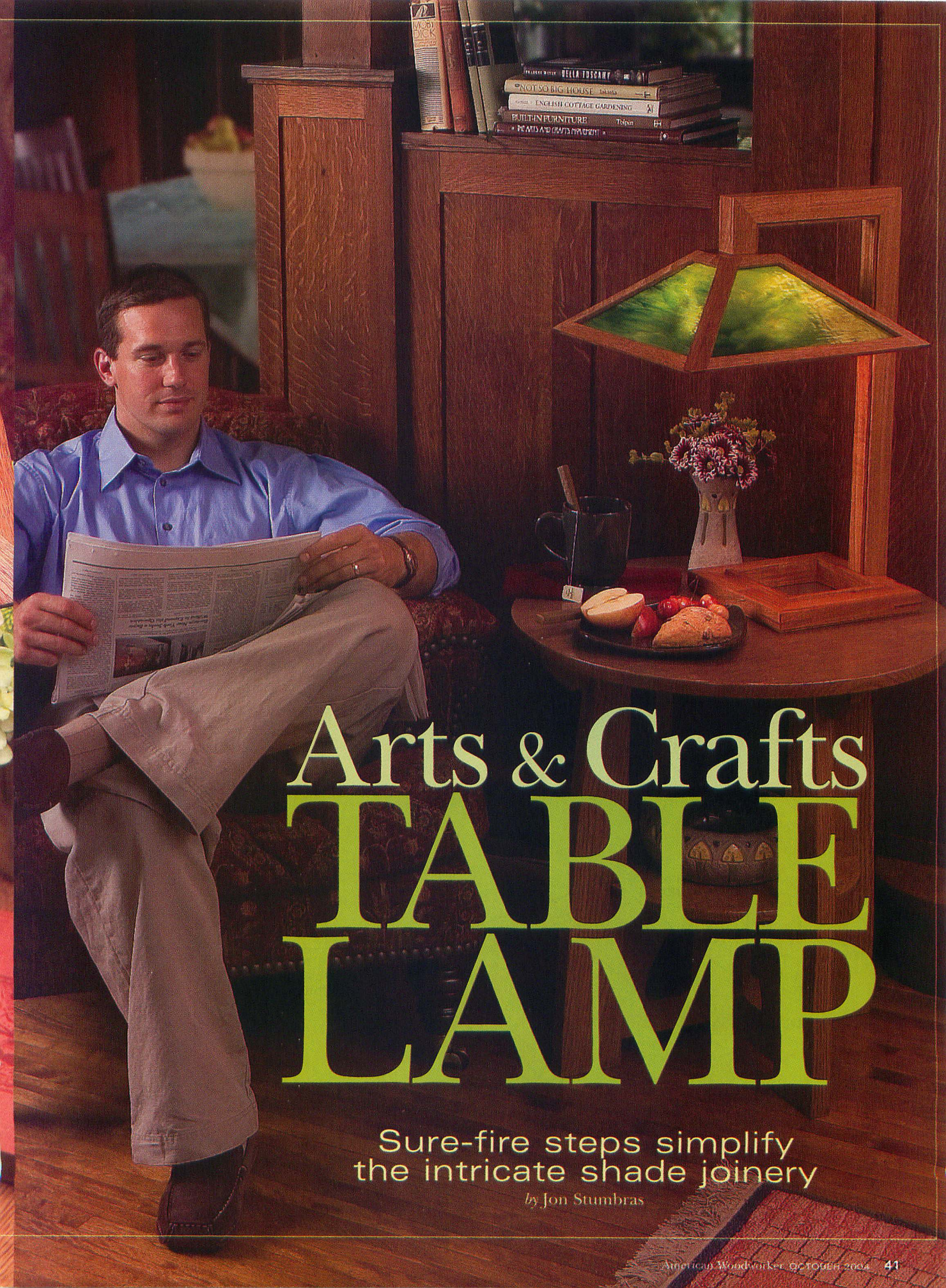
Visit www.woodanswers.com for more information.

Varathane -
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Minwax is a registered trademark of the Sherwin Williams Company.
*Source: Preference Test of the Varathane Line versus the Minwax Line of Interior Wood Stains, May 2003





Arts & Crafts TABLE LAMP

Sure-fire steps simplify
the intricate shade joinery

by Jon Stumbras

PROJECT REQUIREMENTS AT A GLANCE

Materials:

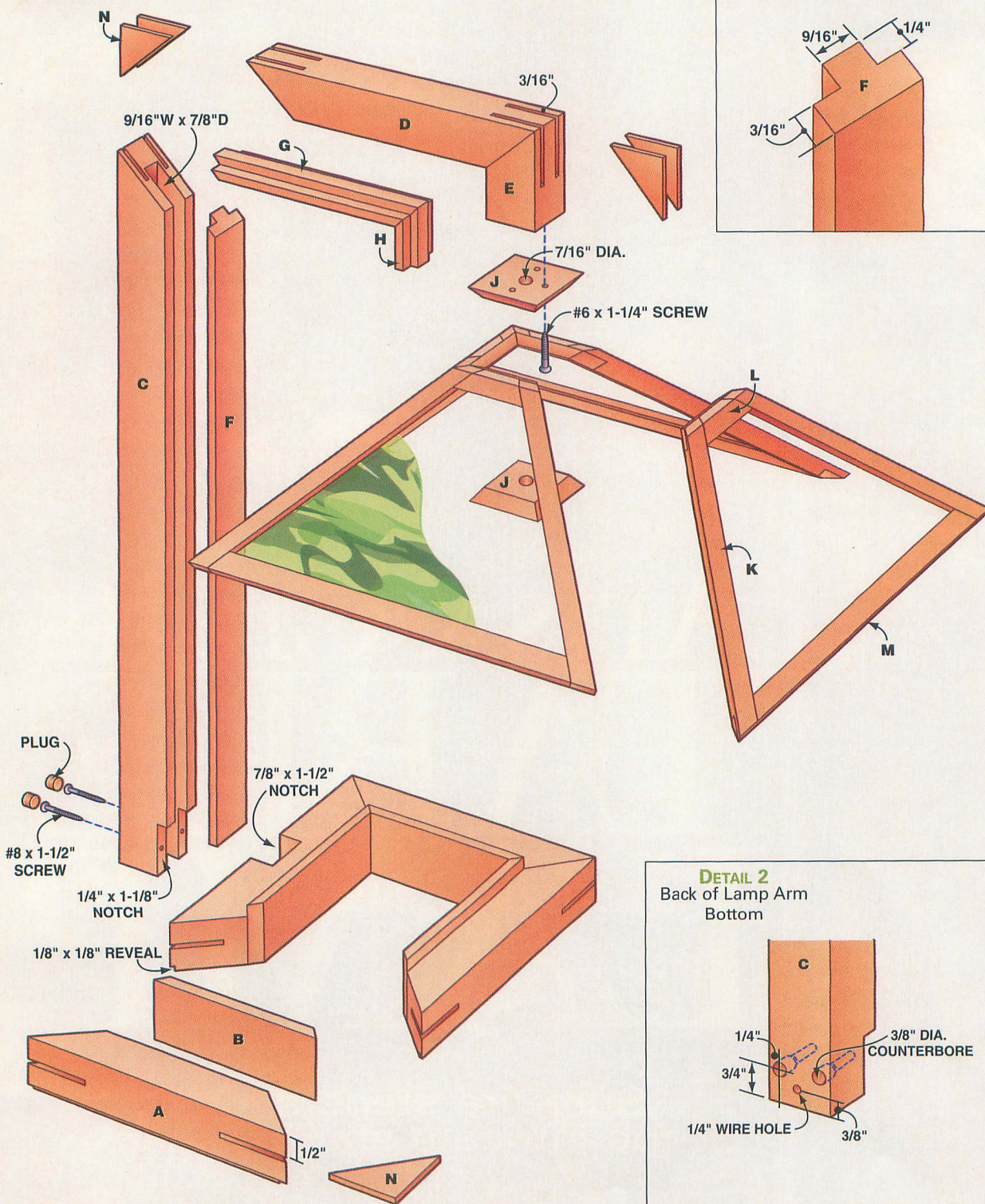
3 bd. ft. of 8/4 mahogany
3 bd. ft. of 4/4 mahogany
Electrical parts
Stained glass

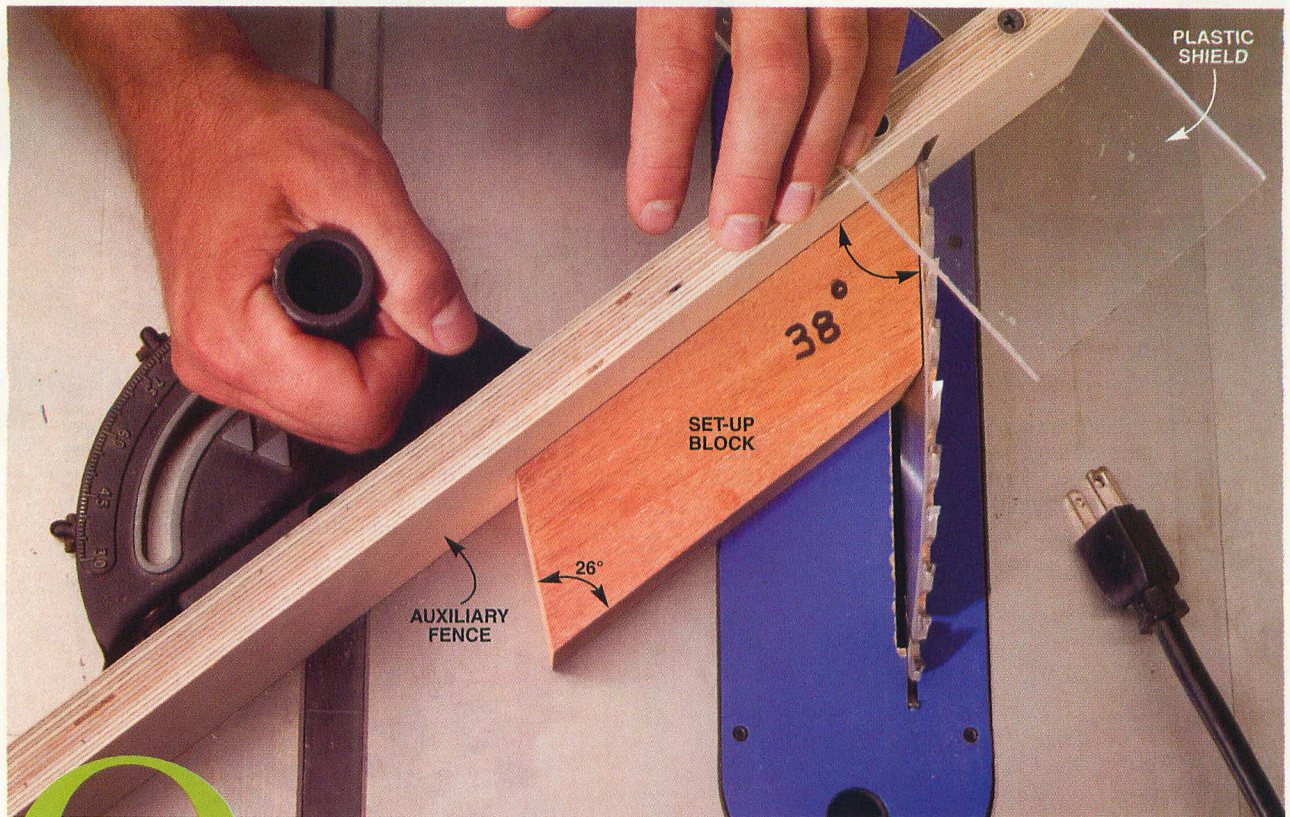
Tools:

Tablesaw, dado blade, router,
1/4-in. router guide bushing, 1/4-in.
straight cutting bit and jigsaw.

Total cost: \$120.

FIGURE A EXPLODED VIEW





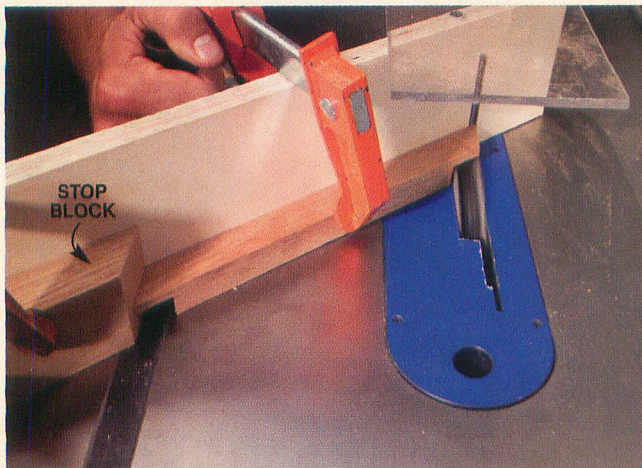
Our table lamp is reminiscent of the Prairie style of design, with lines that Frank Lloyd Wright might favor. In spite of its complex-looking shade, this elegant lamp is within reach of any intermediate woodworker. We've figured out a straightforward system that tames all those nasty angles and guarantees good results. The wiring is also simple, even if you haven't done much electrical work. All the parts are readily available through the mail or at a lighting store. You may find that the hardest part is selecting the stained glass. There is a bewildering array of colors and textures to choose from, but that's part of the fun.

Two precisely angled cuts are key to building the lamp shade. You'll go back and forth between these cuts a number of times. To ensure accuracy, make a setup block with both angles to use every time you reset the miter gauge or the tilt of the blade.

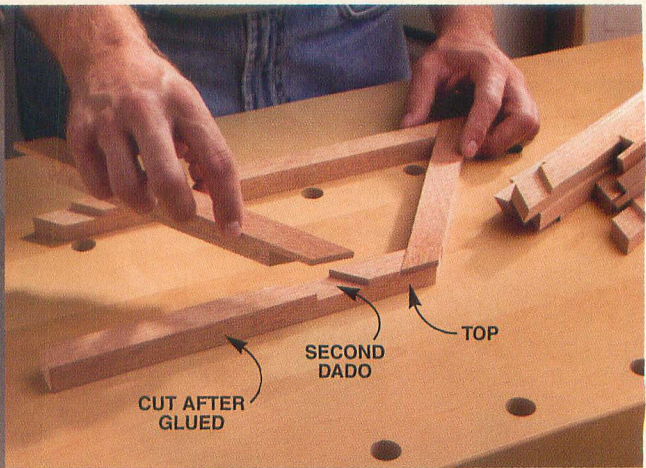
Caution: Fasten a piece of plastic to the top of the auxiliary fence to keep your fingers away from the blade.

CUTTING LIST OVERALL DIMENSIONS: 14-1/2"W x 22-1/2"H x 17"D

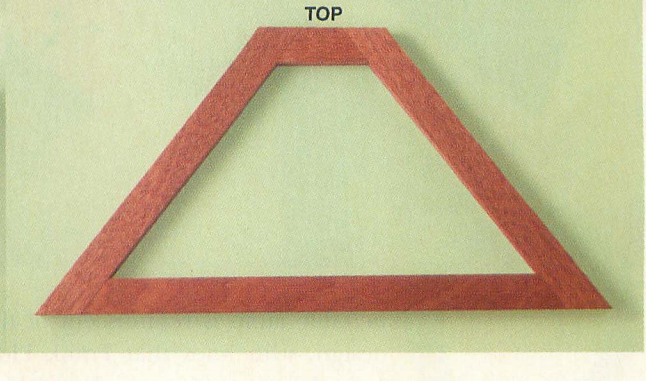
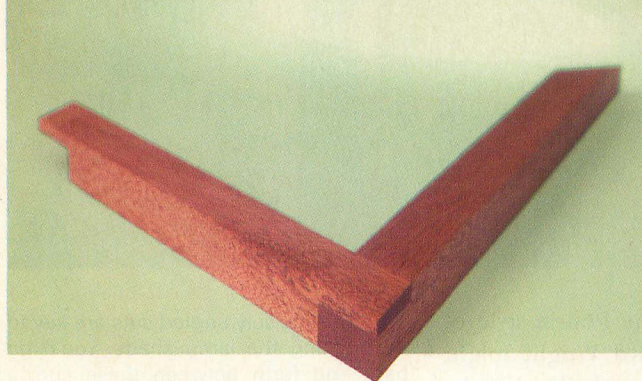
Material	Part	Name	Qty	Dimension	Material	Part	Name	Qty	Dimension
Mahogany	A	Base sides	4	1-1/8" x 1-1/2" x 9-1/4"	Electrical	Q	Lamp cord and plug	1	18 g. 8 ft. long
	B	Base lip	4	5/16" x 1-3/8" x 6-5/16"		R	Rotary line switch	1	
	C	Arm (vertical)	1	1-1/2" x 1-1/2" x 22-1/2"		S	Bushing	1	1/8" ips, female bushing
	D	Arm (horizontal)	1	1-1/2" x 1-1/2" x 10-3/4"		T	Steel pipes	2	1/8" ips, 10" long
	E	Arm (end)	1	1-1/2" x 1-1/2" x 3"		U	Couplings	3	1/8" ips, female
	F	Vertical cover plate	1	7/16" x 1-1/8" x 21"		V	Steel pipe	1	1/8" ips, 9" long
	G	Upper cover plate	1	7/16" x 1-1/8" x 9"		W	Armbacks (elbows)	2	90 degree, 1/2" ball, 1/8 ips
	H	End cover plate	1	7/16" x 1-1/8" x 2"		X	Nipple	1	1/8" ips, 5" long
	J	Shade hangers	2	3/8" x 2-1/2" x 2-1/2"		Y	Star lock washers	2	1/8" ips
	K	Shade sides	8	3/4" x 1" x 10-1/2"		Z	Nuts	3	1/8" hex nut
	L	Shade tops	4	3/4" x 1" x 12"		AA	Keyless sockets	2	
	M	Shade bottoms	4	3/4" x 1" x 15-1/2"		BB	Cluster body	1	1-1/16" x 1-1/16"
	N	Splines	8	1/8" x 2" x 3-1/2"		CC	Brass arms	2	3-1/2", 1/8" ips
	P	Stained glass	4	1/8" x 12-1/4" x 6-1/8"		DD	Wire nuts	2	9/16" x 5/16"
Glass									



2 Cut the angled half-lap joints for the lampshade frame with a dado blade. Clamp a stop block to the fence so every joint comes out exactly the same size. Test the fit of scrap parts before cutting the real thing.



3 Assemble the frame without glue to determine the exact position of the top's second dado. This piece is actually quite short in the finished shade, but it's much easier to make and hold on the saw if you start with a long piece of wood. Trim the excess length after the frame has been glued up.



BUILD THE SHADE FRAME

The shade is made of four identical frames. Use a stop block for all the cuts.

1. Mill the 4/4 mahogany to thickness and rip the boards into 1-in. widths. Rough-cut three 12-in. pieces and one 18-in. piece for each of the four frames (K, L, M). Cut enough parts to build an extra frame as a precaution and for setup purposes.

2. Attach a long auxiliary fence to your tablesaw's miter gauge. We added an acrylic guard just as a reminder of where not to put one's fingers.

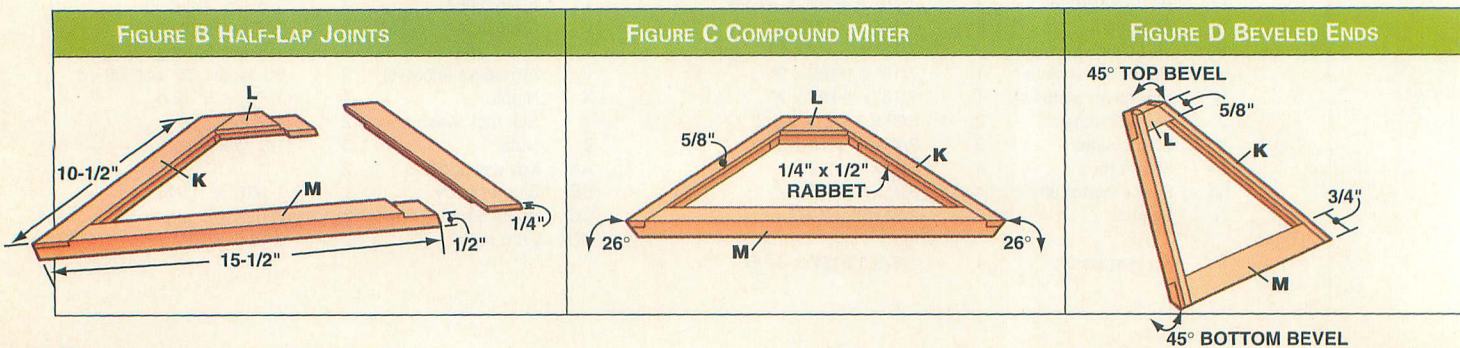
3. Make a setup block for setting your miter gauge angles by cutting a 38-degree angle on one end and a

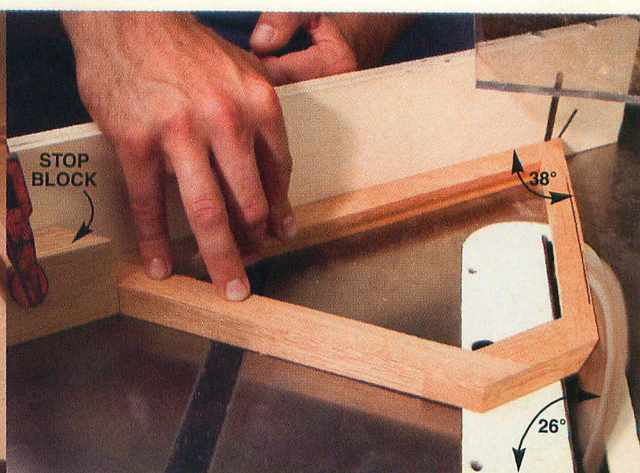
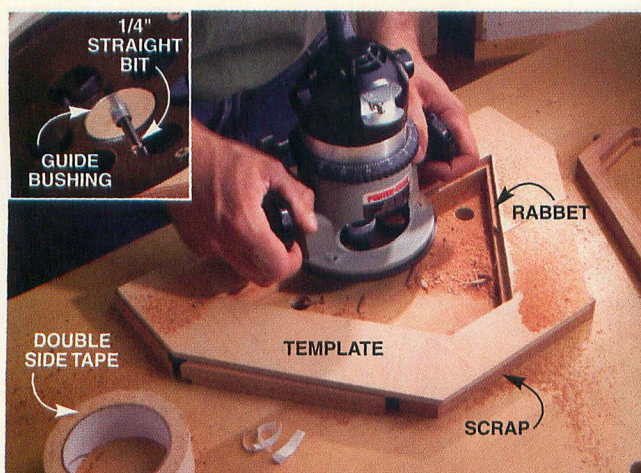
26-degree angle on the other one. Use an accurate miter saw to cut the block.

4. Set the miter gauge to cut at 38 degrees (Photo 1). Miter both ends of the frame sides (K) and frame bottoms (M) to final dimensions. Miter just the left edge of the frame top (L). All these cuts can be made using one miter fence setting.

5. Cut the half-lap joint on the mitered end of each piece (Photo 2; Fig. B, below). Use scrap wood to set the blade height and a stop block for each cut. You will need to rotate the miter gauge 38 degrees right and left of center to accomplish all the angles.

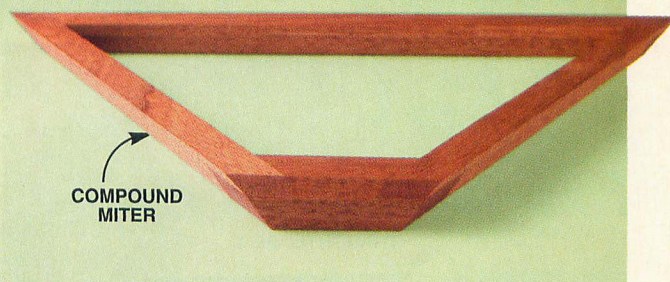
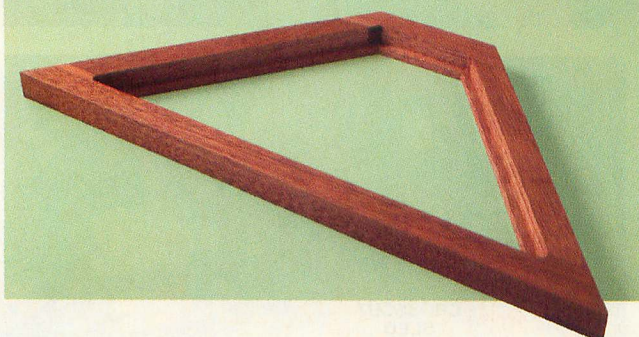
6. Dry-fit all the pieces together and mark the posi-





4 Rabbet each frame to accept the stained glass. Make a plywood template with wide edges to guide and support the router. Use double-stick tape to secure the frame to the bench and template. Tuck frame scraps under the template for support. Rout the rabbet with the template guide.

5 Rip compound angles on both sides of all four frames. Be sure to cut one side first on each frame before resetting the miter gauge to cut the other sides.



tion of the half-lap on the right side of the frame top (Photo 3). Then cut the rest of the top half-laps.

7. Glue each frame assembly together with small C-clamps. When the glue has set, cut off the waste on the top.

RABBET FOR THE GLASS

8. Make a template out of 1/4-in. plywood to cut rabbets in each frame. Simply place a shade frame on the plywood, trace the interior and mark lines 1/4 in. to the outside of the tracing lines. Cut to this line with a jigsaw. Keep the template 3 in. wide to support the router.

9. Rout the rabbet with a 1/4-in. straight bit and guide bushing (Photo 4; Fig. C, below). Take several

passes of to get the rabbet to full depth. Clean up the corners of the rabbet using a chisel.

CUT THE COMPOUND MITERS

10. Use the setup block to set the tablesaw miter fence to cut at 38 degrees and angle the blade to 26 degrees.

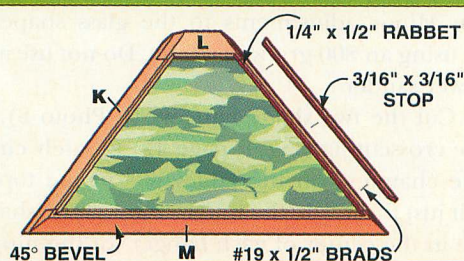
11. Place a frame, face side up, with the bottom against the fence. Cut the compound miter (Photo 5), leaving a 5/8-in.-wide side (Fig. C). To ensure a clean joint, make two passes. The first cut is just shy of the line. For the second cut, add a shim, such as a playing card, to the stop block. This will take just a whisker off for a super-clean edge.

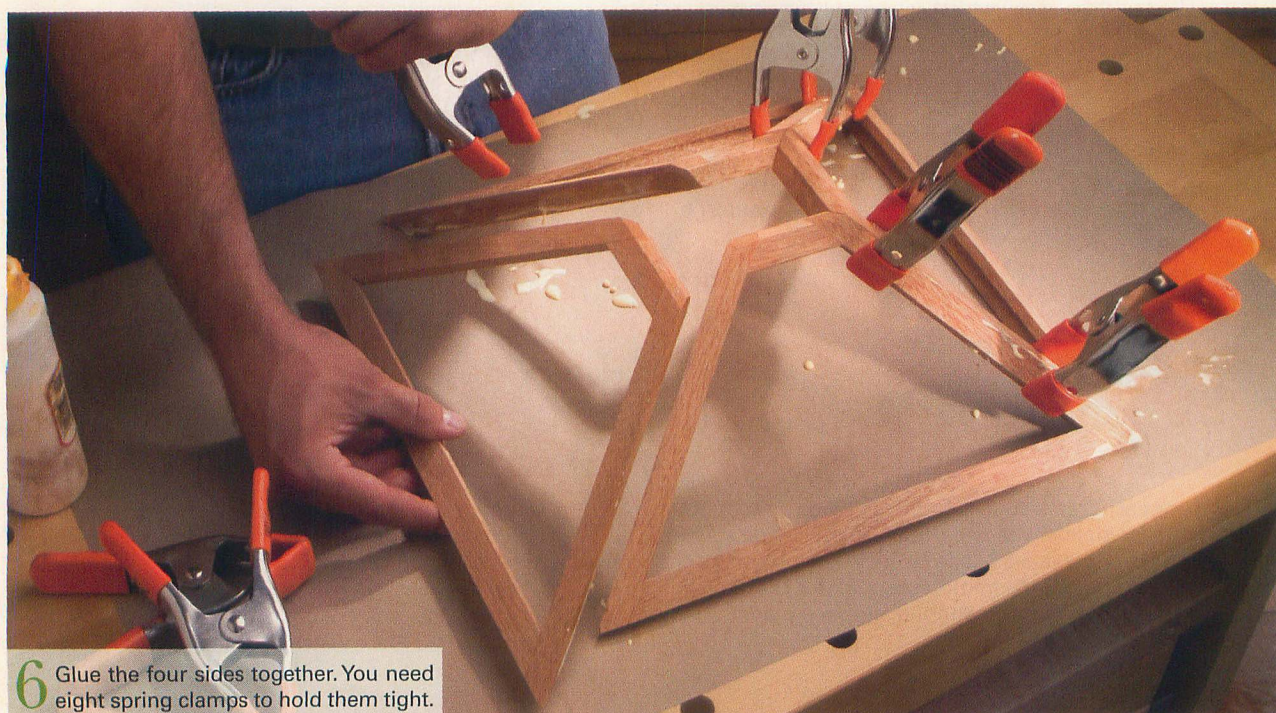
12. Next, place the freshly cut side against the miter fence and adjust the angle so the uncut side is parallel to the blade. This should be approximately 76 degrees on the miter gauge. Then miter the second side.

13. With a beveled side against the fence, adjust the miter fence so the frame bottom is parallel to the blade. Reset the blade to 90 degrees; rip each bottom to 3/4 in. wide (Fig. C). Reset the blade to 45 degrees and bevel the underside of the frame's bottom just up to the routed rabbets (Fig. E).

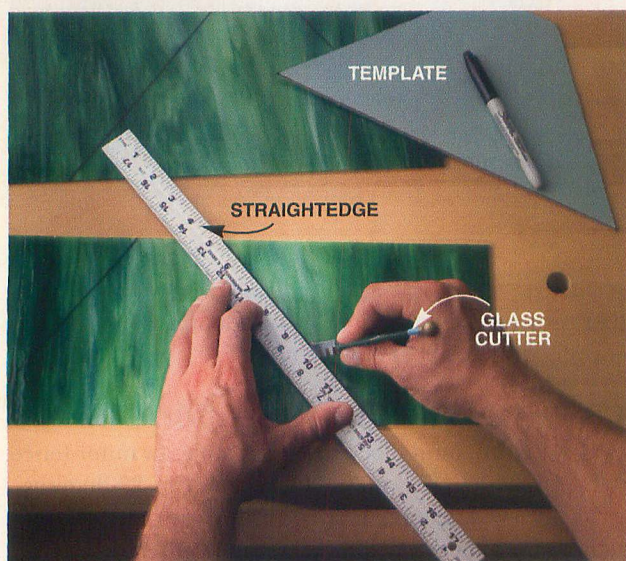
14. Remove the miter fence, flip the frame over onto its face and use the tablesaw fence to bevel the top.

FIGURE E GLASS STOP

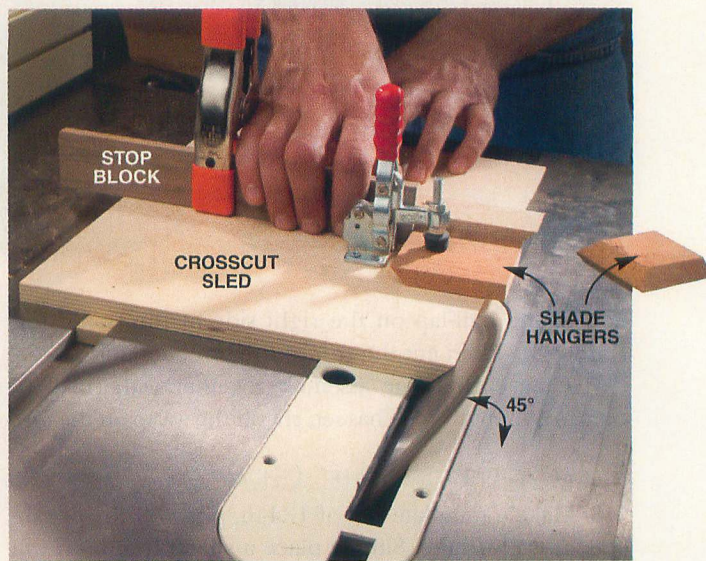




6 Glue the four sides together. You need eight spring clamps to hold them tight.



7 It's easy to cut your own glass for the shade. Lay out the parts with a cardboard template, then score inside the lines with a glass cutter and snap off the waste sections.



8 Two small beveled blocks are needed to hold the shade to the arm. For safety, cut the blocks with a simple sled made out of plywood and a toggle clamp. Adjust the sled's stop block until the blocks fit perfectly.

15. Glue the four frames together using spring clamps (Photo 6). When dry, clean up the glue and sand.

CUT THE GLASS AND SHADE HANGERS

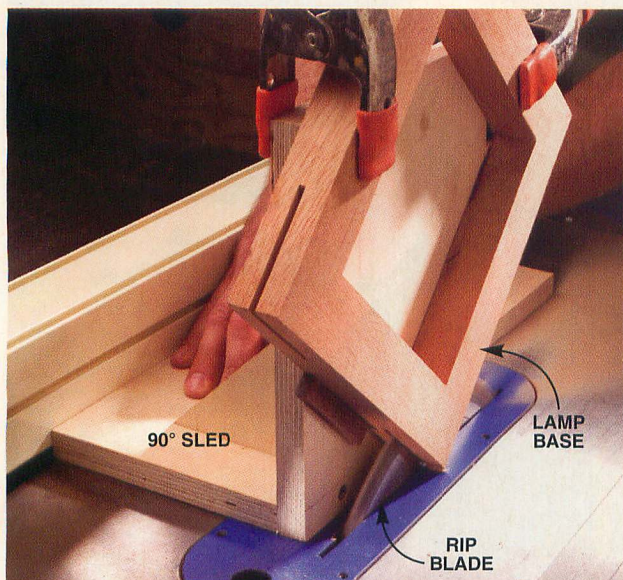
16. Make a cardboard template 1/32 in. smaller than the frame opening. Mark this pattern on the glass using a felt-tipped marker.

17. Make a single scoring cut just inside one of the lines (Photo 7). Place the scored edge over the end of the bench and, with a gentle downward motion, snap

the glass at the scored mark. Repeat until all the glass is cut. Be sure to wear gloves for this step. The freshly cut glass can be razor sharp.

Tip: Minor adjustments to the glass shape can be made using an 800-grit waterstone. Do not use a grinder or power sander.

18. Cut the two shade hangers (J, Photo 8). Make a simple crosscut jig (Fig. F, page 47) to safely cut the 45-degree chamfers on the tablesaw. Cut the top hanger until it just fits inside the mitered top of the shade. Drill a hole in the center of each hanger for the nipple (X).

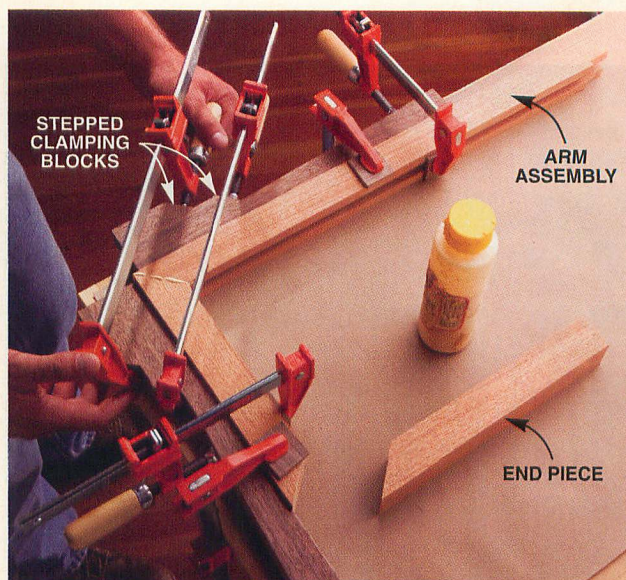
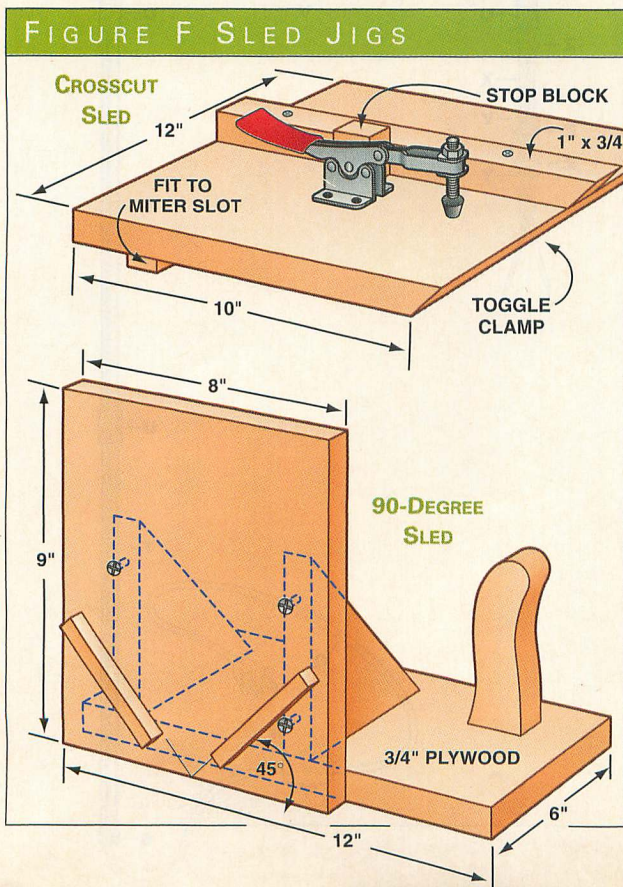


9 The lamp base is simply a mitered frame, reinforced with splines. Cut slots for the splines with a rip blade and a 90-degree sled. A rip blade is best because it cuts a flat bottom. That's essential for a clean-looking joint.

MAKE THE BASE AND ARM

19. Mill 8/4 mahogany to 1-1/2 in. Rip stock for the four base sides (A) to 1-1/8 in. Miter to the final dimension.

20. Glue up the base with a band clamp. After the glue dries, cut slots for the splines (N) on the tablesaw (Photo 9) using a shop-made sled (Fig. F, below). Glue in the splines and trim them flush when dry. Cut the



10 Glue the arm assembly one joint at a time with a pair of stepped clamping blocks. Leave the end piece extra-long for now, so there's room to attach the stepped block. Cut this piece to length after it's glued.

reveal around the bottom of the base (Fig. A, page 42).

21. Cut a notch in the base (Fig. A) with a dado blade.

22. Mill 4/4 mahogany to 5/16-in.-thick stock and rip to 1-3/8 in. for base lip (B). Miter to fit inside the base, and glue.

23. Cut a 45-in. length of 1-1/2-in. x 1-1/2-in. mahogany for arm assembly parts (C, D and E).

24. Cut a deep groove for the conduit in the center of one side (Fig. A).

25. Miter the arm assembly parts. To make clamping the miter easier, leave part E long until after the glue-up.

26. Cut the notch in the bottom of Part C (Fig. A). Dry-fit the base and the vertical arm.

27. Drill two holes (Fig. A, Det. 2, page 42) for the screws that attach the base and arm. Drill a third hole for the lamp wire.

28. Glue the arm assembly one joint at a time (Photo 10).

29. Cut the splines' slot in the assembled upright, as in Step 19, and glue in the splines. Cut the splines and sand them flush.

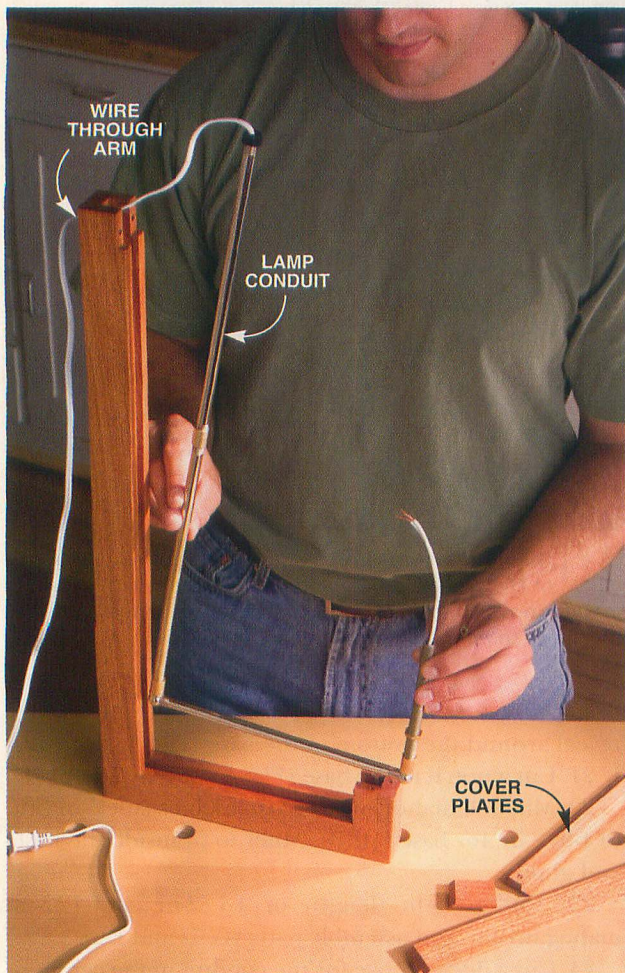
30. Cut arm end (E) to final length.

31. Make cover plate F, G and H (Fig. A, Det. 1) from a 40-in.-long strip of wood. Cut the rabbets so the cover plates fit snugly into the groove with hand pressure.

32. Miter the completed cover plates to fit the upright.

33. Sand the shade, base, upright and hangers to 220 grit and apply the finish.

34. Install the stained glass in the shade. Rip stops on the tablesaw (Fig. E, page 45). Miter the stops to fit behind the glass and attach them with No. 19 x 1/2-in. brads.



11 Install the lamp conduit into the arm assembly. Run lamp cord through the hole in the base of the arm first, then through each of the loose sections of conduit. Assemble the entire conduit. Cover plates conceal the conduit. They are friction-fit to allow access to the wires, should you ever have to take apart the lamp.

ASSEMBLE THE WIRING CONDUIT

We've wired this lamp the safest way possible using metal conduit to protect the wires. The lamp cord has a polarized plug for safety and a add-on power switch for simplicity.

35. Cut two 10 in. pieces from the end of lamp cord (Q) and set aside for wiring the sockets later.

36. Feed the lamp cord through the hole in the upright (Photo 11). Assembling the conduit is just a matter of screwing Parts S through X together and feeding the wire as you go (Fig. G, right). Don't overly tighten the two armbacks (W) as they can cut through the cord insulation. Make sure several inches of cord feed past the end of the nipple (X).

Tip: Reverse twist the cord before screwing on the last armback so the wire is not wound in the conduit.

37. Lay the conduit in the upright assembly (Photo 11).



12 Screw the base onto the upright to complete the lamp. Install mahogany plugs into the screw holes for a finished look.

FIGURE G CONDUIT ASSEMBLY

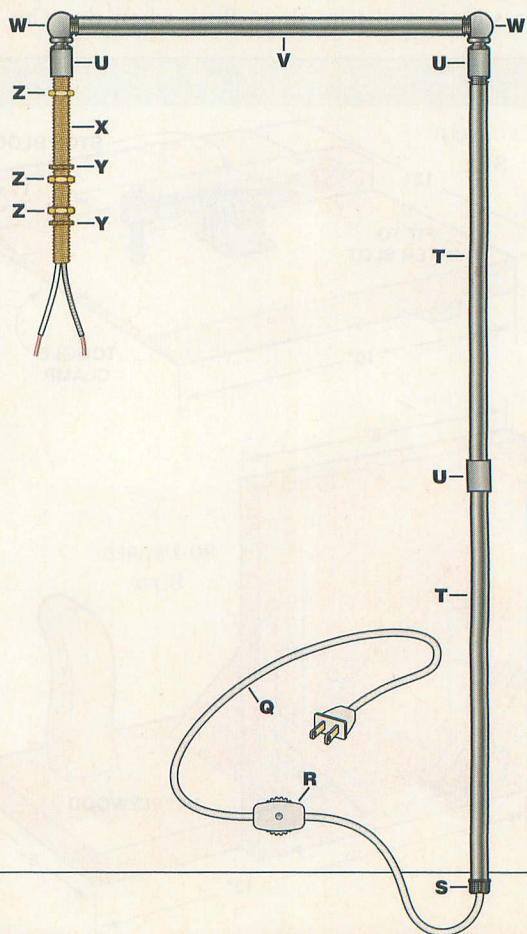
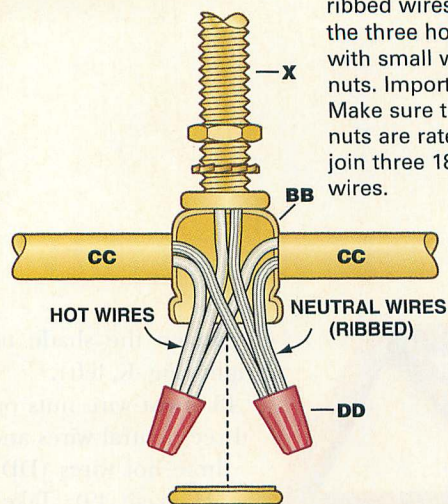


FIGURE H CLUSTER WIRING



Combine the three ribbed wires and the three hot wires with small wire nuts. Important: Make sure the wire nuts are rated to join three 18-gauge wires.

WIRE THE BULB SOCKETS

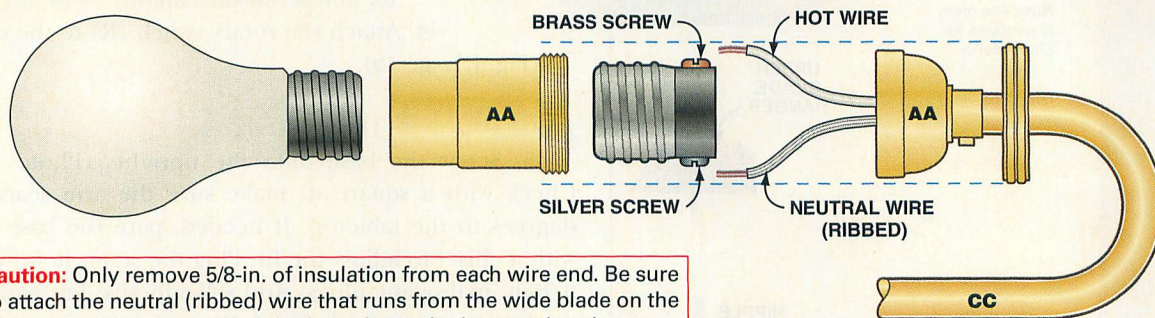
38. Screw the two arms (CC, Fig. H) into the cluster (BB).

39. Feed 10 in. of lamp cord from the cluster through each arm.

40. Wire the sockets (AA, Fig. I). Strip 5/8 in. of insulation from each wire end and wrap the bare wire three-quarters of the way around the screw.

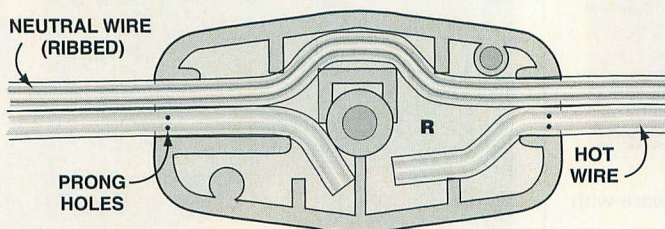
41. It's standard practice in lamp wiring that the neutral wire is marked. Our wire was marked with ribbing on the insulation. Other manufacturers may use different colored insulation or a colored strand in the wire itself. No matter how it's marked, you can always tell the neutral wire; it's the one that comes off the wide blade on the plug.

FIGURE I SOCKET ASSEMBLY



Caution: Only remove 5/8-in. of insulation from each wire end. Be sure to attach the neutral (ribbed) wire that runs from the wide blade on the plug to the silver screw and the hot wire to the brass-colored screw.

FIGURE J ROTARY SWITCH



Cut the hot wire, lay both wires through the switch, snap on the cover and screw it down. Small metal prongs penetrate the insulation and complete the switch.

SOURCES

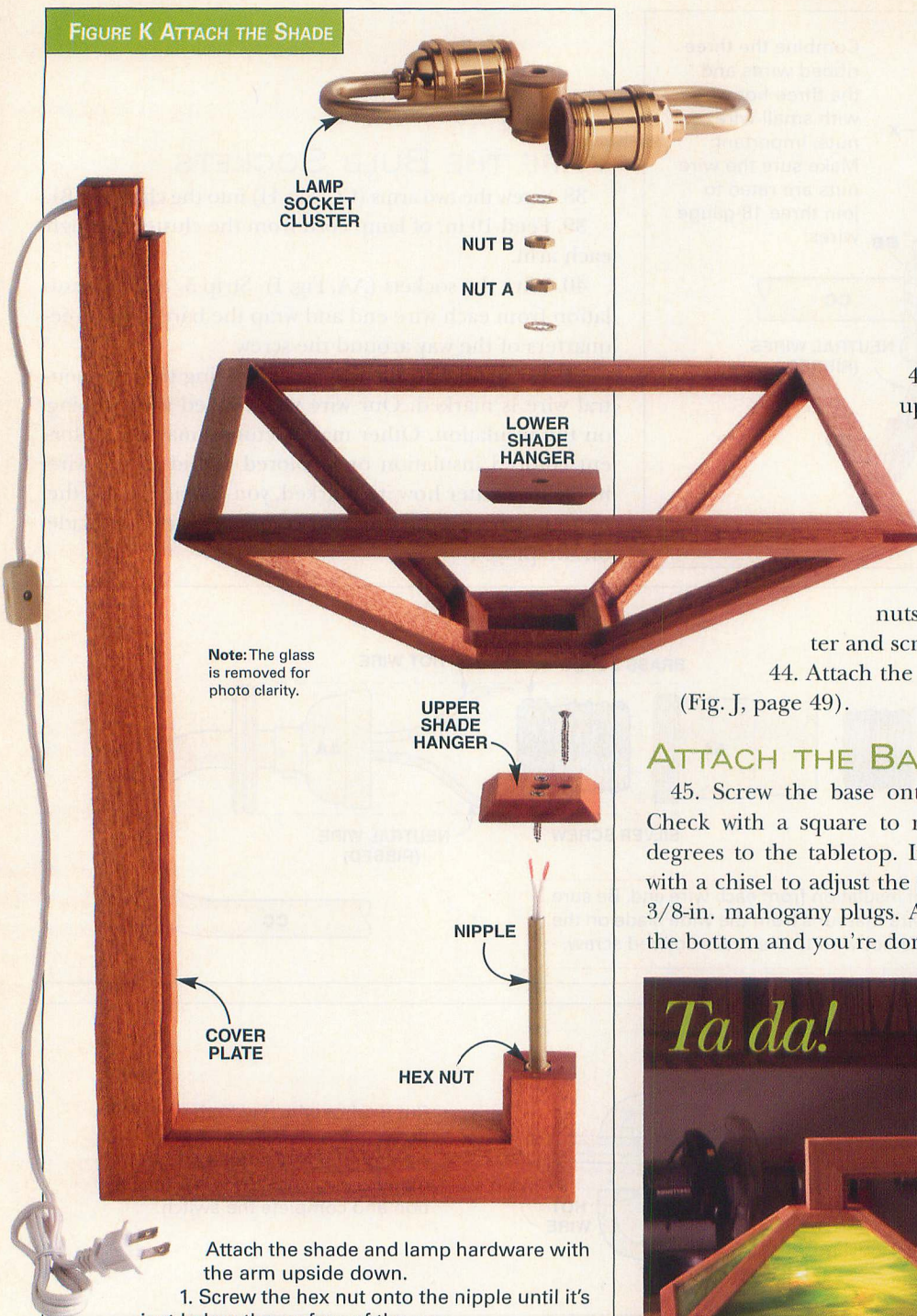
Grand Brass Lamp Parts
(212) 226-2567
www.grandbrass.com
One 10-ft. 18/2 SPT-1 cord with molded plug, #WIC10FTBL, \$1.50
One black rotary line switch for SPT-1 cord, #SW423BL, \$0.80
One 1/8 ips female black bushing, #BG201B, \$0.10
Two 10-in. x 1/8 ips steel pipe, #PIST10, \$0.75 ea.
One 9-in. x 1/8 ips steel pipe, #PIST09, \$0.75
Three straight coupling brass 1/8F

thru #NE449, \$0.20 ea.
Two 1/8m bottom x 1/8f side, 1/2 ball 90-degree armback #AB335NP \$0.75 ea.
One 5-in. x 1/8 ips nipple steel, #NI5-0X1/8, \$0.60
Two 1/8 ips slip star lock washer, #WA1/8STAR, \$0.02 ea.
Three 1/8 hex nut, brass, #NU424, \$0.08 ea.
Two 3-1/2-in. plain (J) arm brass 1/8m ips, #ARJL, \$2.25 ea.
One small turned cluster body, 2-piece, #BOS2XB, \$2.50

Two MD wire nut, #WINUTG, \$0.10
Two cast-brass uno-threaded keyless socket with 1/8 ips bushing and setscrew, #SO9347CB, \$10 ea.
Processing fee for order under \$50: \$10.
Total cost: Lamp electrical parts, \$50 plus shipping.
Southern Front Stained Glass
(281) 890-5860
www.southernfront.com
Wissmach Glass, W0101, Dark

Green and Opal Wispy
Five 10-1/2 x 16-in. panels, \$27
Fletcher-Terry steel glass cutter, \$4.
Woodworkers Supply
(800) 645-9292
www.woodworker.com
Felt discs, #04A51, \$4 roll of 48
1/4-in. straight bit, #03-140, \$13
1/4-in. router guide bushing #938-048, \$7
Danish oil, 1 quart, #859-973, \$11.

FIGURE K ATTACH THE SHADE



Attach the shade and lamp hardware with the arm upside down.

1. Screw the hex nut onto the nipple until it's just below the surface of the arm.
2. Install the cover plates.
3. Screw the upper shade hanger to the arm. To determine where to place the screw holes, fit the upper shade hanger upside down over the conduit. Draw the outline of the arm end onto the hanger. Remove the hanger, and countersink and drill three holes for the screws. Drill pilot holes into the arm end to prevent splitting.
4. Set the shade on the upper shade hanger and place the lower hanger over the nipple. Tighten nut A and its washer onto the threaded conduit.
5. Install nut B and washer about halfway down the nipple.
6. Thread the lamp socket cluster onto the nipple. Stop when the nipple reaches just inside the cluster.
7. Back off nut B to lock the socket cluster in place.

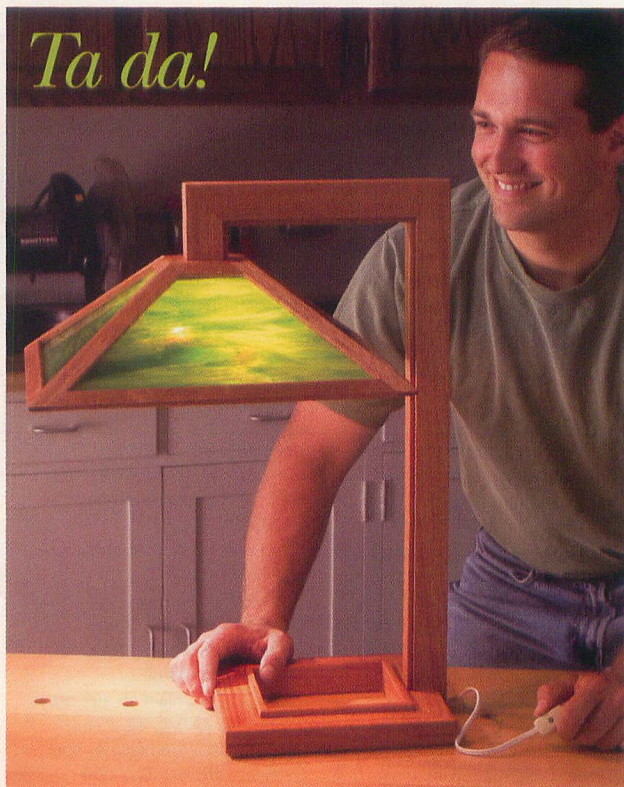
42. Attach the shade to the upright (Fig. K, left).

43. Twist wire nuts on the three neutral wires and the three hot wires (DD, Fig. H, page 49). Take care that all the copper wire strands are in the wire nuts. Push the wires into the cluster and screw the cap on.

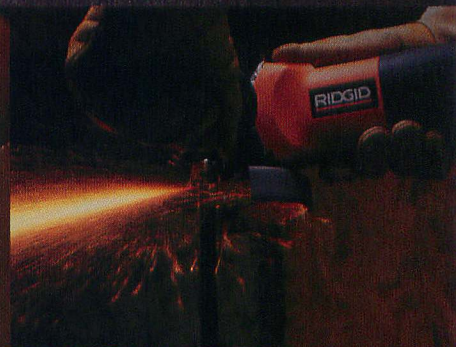
44. Attach the rotary switch (R) to the cord (Fig. J, page 49).

ATTACH THE BASE

45. Screw the base onto the uprights (Photo 12). Check with a square to make sure the arm seats 90 degrees to the tabletop. If needed, pare the base slot with a chisel to adjust the fit. Plug the screw holes with 3/8-in. mahogany plugs. Add self-adhesive felt pads to the bottom and you're done! **AW**



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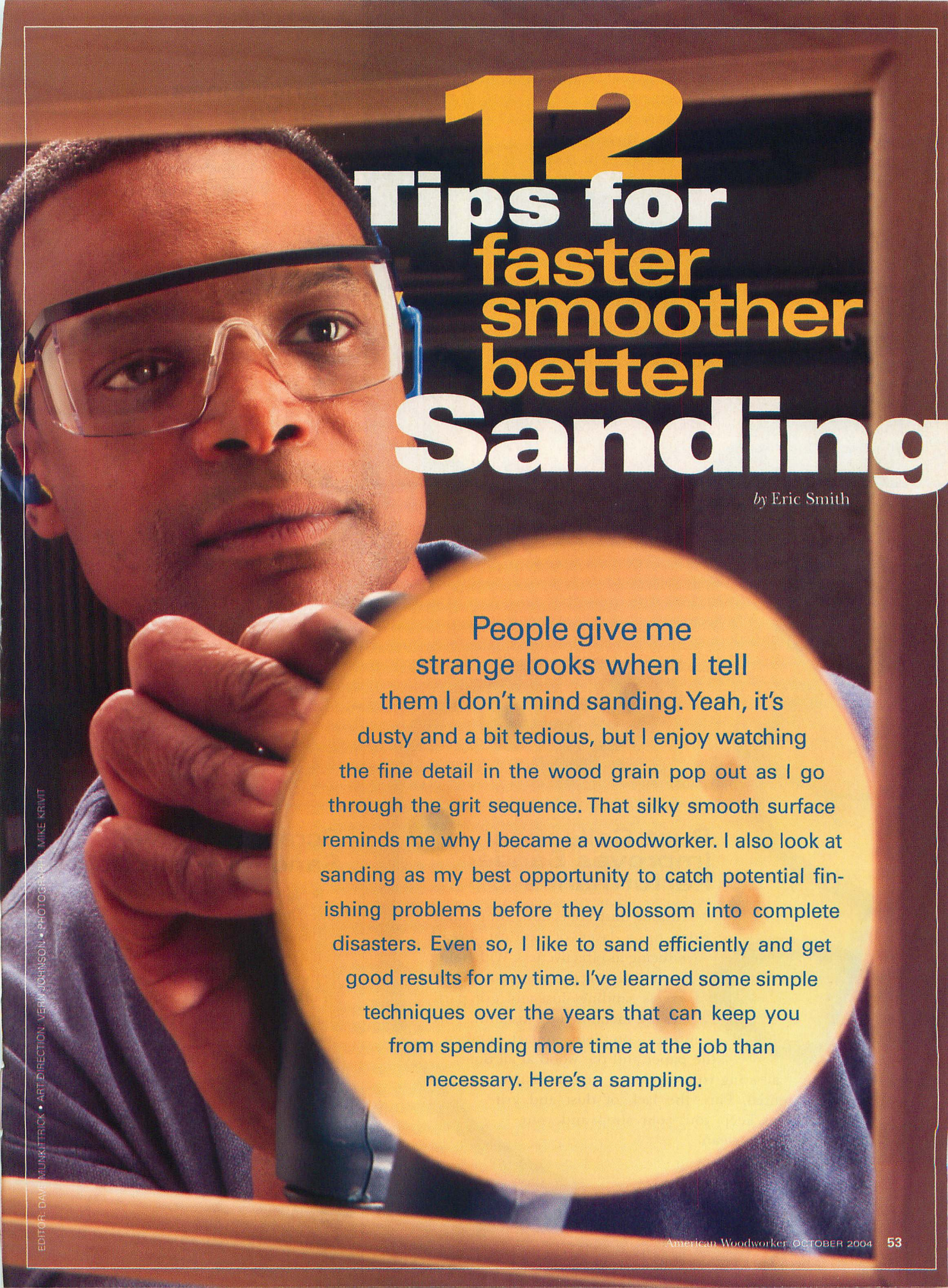
D. Peterson - Minnesota

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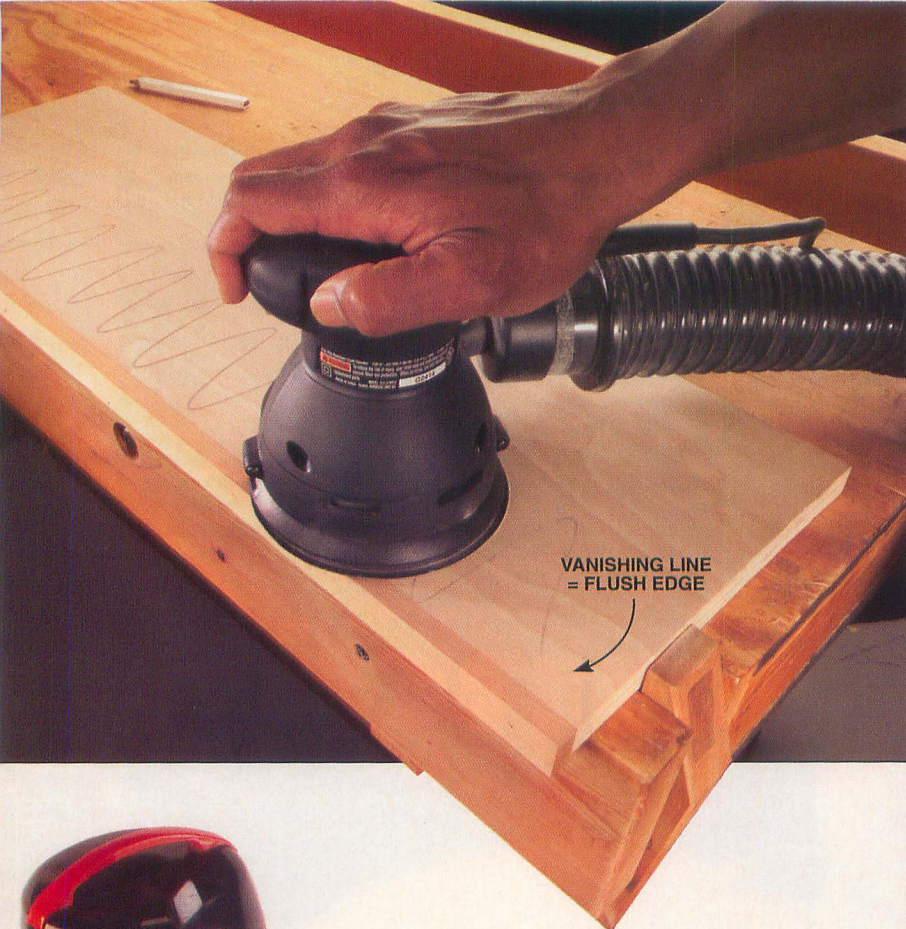
www.oneida-air.com



12 Tips for faster smoother better Sanding

by Eric Smith

People give me strange looks when I tell them I don't mind sanding. Yeah, it's dusty and a bit tedious, but I enjoy watching the fine detail in the wood grain pop out as I go through the grit sequence. That silky smooth surface reminds me why I became a woodworker. I also look at sanding as my best opportunity to catch potential finishing problems before they blossom into complete disasters. Even so, I like to sand efficiently and get good results for my time. I've learned some simple techniques over the years that can keep you from spending more time at the job than necessary. Here's a sampling.



Pencil Lines Tell You When To Stop

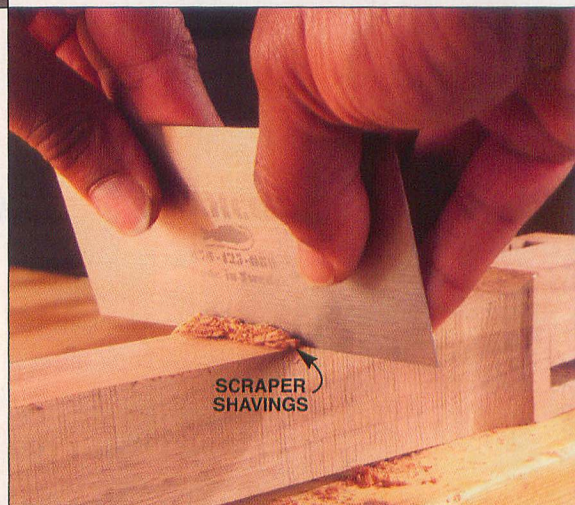
There's nothing worse than sanding right through a veneer. Pencil lines are a great way to gauge sanding progress. I always draw lines on plywood where it meets a solid hardwood edge. The lines will start to disappear when the hardwood edge is flush with the plywood. That's when you know it's time to stop.

Pencil lines work on glued-up boards, too. The boards aren't even until all the lines are gone.



Dust Collection Improves Sander Performance

Without dust collection, your sander rides on a layer of sawdust, greatly reducing its effectiveness. With a shop vacuum hooked up to your sander, excess sanding dust and grit particles are vacuumed up instantly. This ensures complete contact between the paper and the wood at all times allowing your sander to work at maximum potential. Plus, the lack of dust and grit helps keep you, your shop and your lungs clean.



Scrapers Leave Sanders in the Dust

Scrapers have been around for centuries, and for good reason: They do the job fast! A sharp scraper leaves hardwoods with a smooth finish that only needs a little finish sanding. A scraper is faster than an orbital sander and you never have to change grits. The hard part is getting a good cutting edge on a scraper; it takes some practice. But, once you've used a sharp scraper, you'll find yourself reaching for it more often than for your sander. (For more on sharpening a scraper, see AW #102, September 2003, "Foolproof Scraper Sharpening," page 63.)

Source

Highland Hardware
(800) 241-6748, www.highlandhardware.com
BAHCO 474 card scraper, #031509, \$6.

Keep Edges Crisp

Lay pieces of scrap wood of equal thickness to bridge the piece you're sanding. This will prevent the sander from tipping and rounding over the crisp edges.

For sanding the narrow edges of doors, clamp the door between two pieces of thick stock to help steady the sander.



Skip Grits

Really, it's OK. We checked with several major sandpaper manufacturers and each one said the same thing: Whatever grit you start with, you can skip every other grit as you progress from coarse to fine. Using each grit in sequence is almost always overkill, not to mention extremely tedious. If you start at 100, skip to 150, then 220. Or from 80, go to 120 and then 180.



Pipe Insulation Contour Sander

Sticky-backed sandpaper and foam pipe insulation team up to make perfect custom contour sanders. The flexible pipe insulation can be rolled to conform to almost any size of curve.

Source

Hardware stores and home centers, pipe insulation, \$2 per 4-ft. length.



Coarse Grit Saves Time

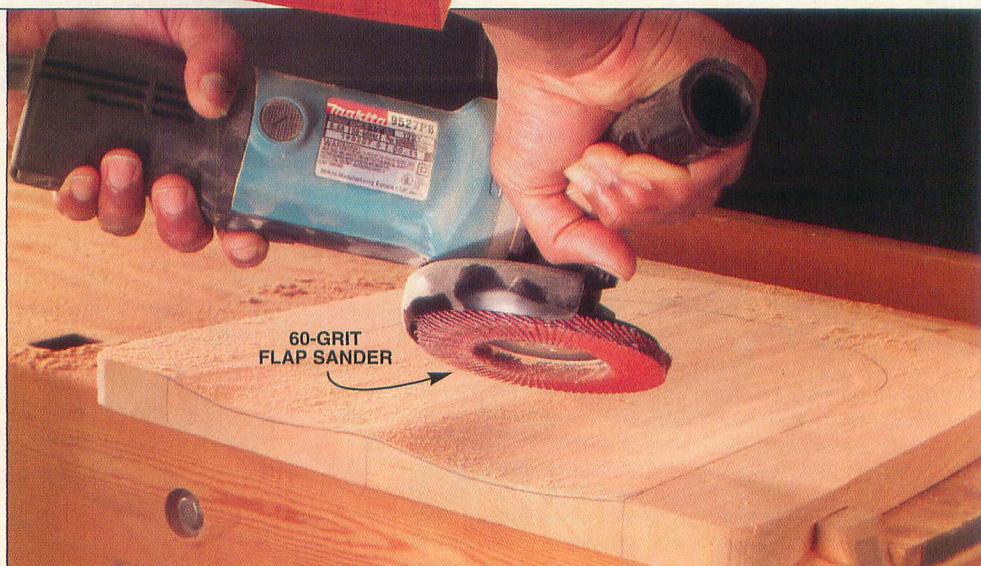
If you need to remove a lot of material, using too fine a grit is a waste of time and paper. Use 80- to 100-grit sandpaper to do the hard, time-consuming work. As a rule of thumb, you should spend about 80 percent of your time with these coarser grits. Then the finer grits simply remove scratch marks from the previous grit.



Flap Sanders Eat Wood

A flap-sanding disc turns an angle grinder into a great tool for shaping and sculpting wood. You'll be amazed at how quickly these things remove wood. Be sure to take time to practice a bit before you scoop out your first chair seat.

Source
Home centers and hardware stores, 3M flap-sanding disc, \$9, angle grinder adapter \$10.



PRICELESS
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Soft Pads Increase Random-Orbit Sanders' Flexibility

A soft replacement pad does a better job than the standard firm pad that comes with your random-orbit sander when it comes to sanding contoured areas.

The thick, flexible pad conforms to a soft curve. A stiff pad tends to dig in and ruin the work.

Source
Check the supplier of your sander; pads vary with brand and model, \$15 to \$25.



Hold Wood Steady with a No-Slip Pad

Router pads do a great job of gripping flat pieces of wood during sanding. With a router pad, you don't need to stop and move clamps around or (one of my personal bad habits) try to hang on to a board with your fingertips and work the sander one-handed.

Source

Home centers and hardware stores, router pad, \$7.

ROUTER
PAD



SANDING
SWIRLS

A Raking Light Finds Hidden Defects

Shine a bright light from different angles across sanded boards to illuminate hard-to-see swirl marks and problem spots while they're still easy to fix. Use the light before each grit change and you'll avoid having to back up several grit levels to remove a deep scratch.

Dampen the Wood for a Clean, Smooth Finish

After your final pass with the power sander, wipe a damp sponge over the wood. As the wood dries, any loose wood fibers will stand up.

Let the wood dry completely. Then lightly sand the whole surface with 220 or higher grit paper to knock off the whiskers. This yields as smooth a wood surface as you can get and is especially important when you use water-based finishes that tend to raise the grain anyway.

Wetting the wood will also reveal any hidden glue smears or sweat drips. Or you can wait until the varnish is on to see them—your choice. **AW**



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I love classic watches. They are finely tuned miniature mechanical marvels that are both beautiful and functional. But many Swiss models cost more than my new car. So we at Stauer decided to replicate the movement of a magnificent \$26,000 Swiss Automatic watch but sell it to you for only \$198. So you end up with \$25,802 in change. That's enough to buy a brand new sedan or SUV.

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We built this brilliant 24k rose gold plated timepiece with a 6-hand movement. The Stauer Monaco displays the date and day of the week. A third interior dial displays 24-hour military time. The exquisite automatic movement is powered by your body's motion so it never needs batteries. The interior workings have over 185 parts assembled by hand. Twenty-four rubies act to minimize the friction on the gears and rotors so the movement maintains incredible accuracy. Every single watch is timed for 15 days before it leaves the factory.

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Tile-Topped Outdoor Table

This sturdy white-oak table will last a lifetime and won't blow over in the wind.

by Jock and Susan Holmen

IF YOU LOVE LOUNGING on your deck and need a solid side table to hold your cool drink and snacks, here's the solution. We designed this stylish side table to be simple to build. It's made of white oak and finished with an outdoor stain, so it's sure to handle the weather. The ceramic-tile top provides a durable maintenance-free accent.

PROJECT REQUIREMENTS AT A GLANCE

Tools: Tablesaw, bandsaw, plate joiner, planer, jointer.

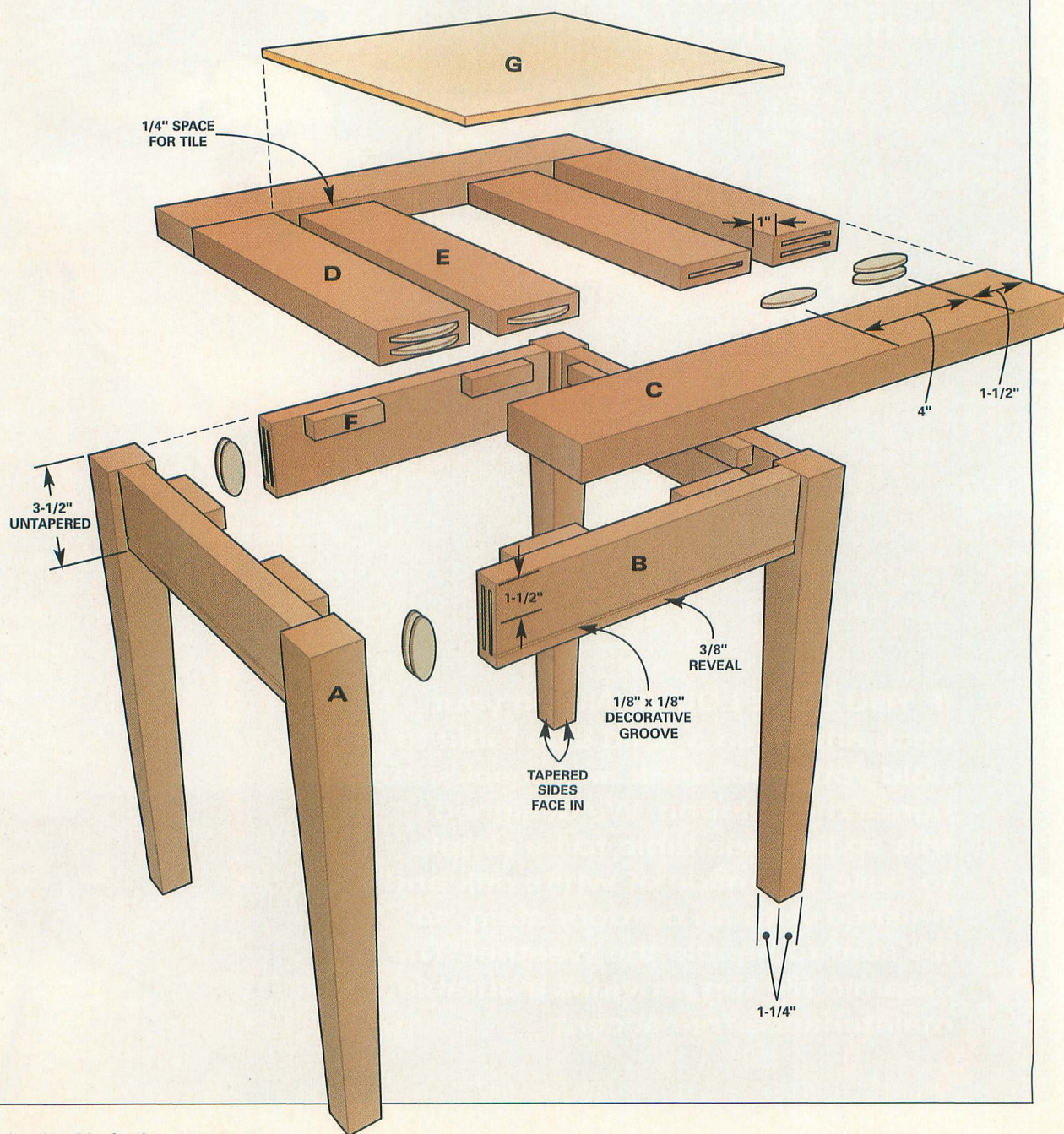
Materials: 4 bd. ft. of 8/4 (2-in.) white oak, 8 bd. ft. of 5/4 (1-1/4-in.) white oak, No. 20 biscuits, one 12 x 12-in. ceramic tile, exterior wood glue, exterior stain, silicone caulk.

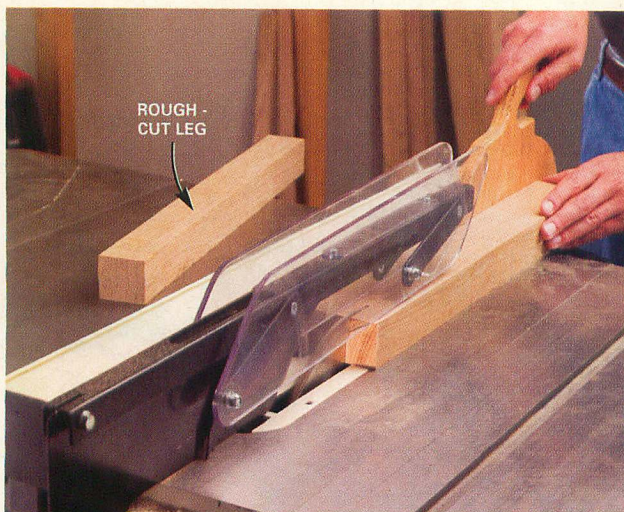
Total cost: About \$50.

CUTTING LIST Overall Dimensions: 18" x 18" x 19"

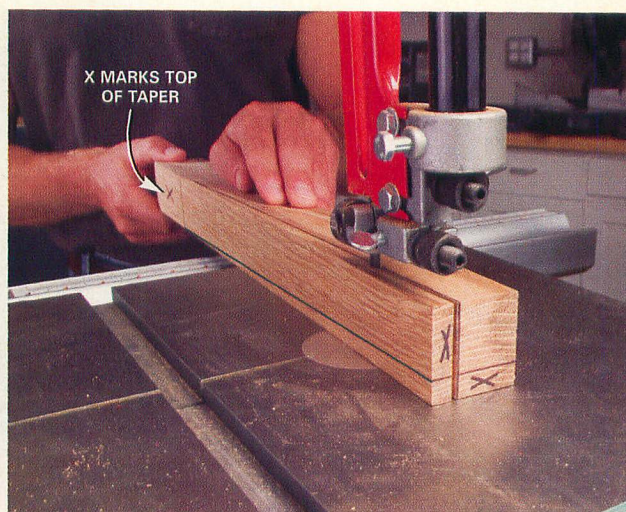
Part	Name	Qty.	Dimensions
A	Leg	4	1-3/4" x 1-3/4" x 19"
B	Apron	4	1" x 3" x 12-3/4"
C	Long frame	2	1" x 3" x (tile length + 6-1/8")
D	Short frame	2	1" x 3" x (tile length + 1/8")
E	Tile supports	2	3/4" x 3" x (tile length + 1/8")
F	Glue block	8	3/4" x 3/4" x 3"
G	Tile	1	1/4" x 12" x 12"

FIGURE A EXPLODED VIEW





1 Rip thick lumber for the legs to rough size on the table-saw. Always use a pushstick when cutting narrow boards. Joint, plane and crosscut the legs to final size.



2 Bandsaw two tapers on adjacent sides of each leg. Saw each taper about 1/16 in. oversize. The tapers are subtle, so mark an X at the top of each one to help you keep track of which surface is tapered.

BEFORE YOU START

Buy your ceramic tile before you build this table, because the actual size of tiles can vary. We purchased a single 12-in.-square x 1/4-in.-thick ceramic tile at our local home center. The actual size was closer to 11-7/8-in. square. The tile is undersize to allow a grout joint in normal applications, but the amount can vary. We used white oak for its natural resistance to rot (see Sources, page 64). Other wood, such as mahogany, teak, cedar or ipe, will also withstand the elements.

TAPER THE LEGS

Start by sawing the 8/4 lumber for the legs (A) 1/8-in. oversize (Photo 1). Then joint, plane and cut to the final size (see Cutting List, page 60).

Next, mark an X at the top of two adjacent sides on each leg. These two marked sides will be tapered. Use these Xs to help you keep track of the tapers. The tapers are subtle and it's possible to confuse them with the untapered outer sides (see Oops! page 64). Also, the legs are untapered where they join the aprons (B, Fig. A, page 60).

Mark lines for the tapers on each leg and saw the taper on the bandsaw (Photo 2). Stay about 1/16 in. away from your pencil line. After the first taper is cut, reattach scrap with masking tape and cut the second taper. Remove the bandsaw marks with a pass or two over your jointer (Photo 3).

CUTTING THE DOUBLE BISCUIT SLOTS

Using spacers makes easy and accurate work out of cutting the double biscuit slots in the legs. This setup works with any biscuit joiner and the only measuring you need to do is to locate the center of the slot down from the top

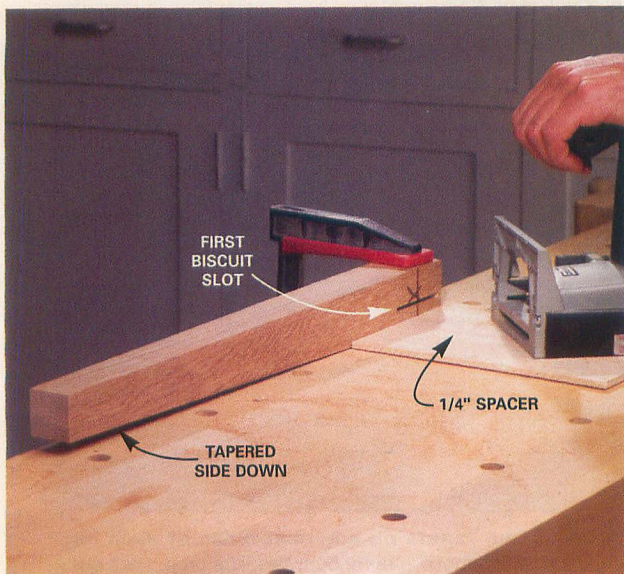
of the legs (Fig. A). Make sure to cut the biscuit slots in the legs with the adjacent taper down (Photos 4 and 5).

MAKE THE APRONS

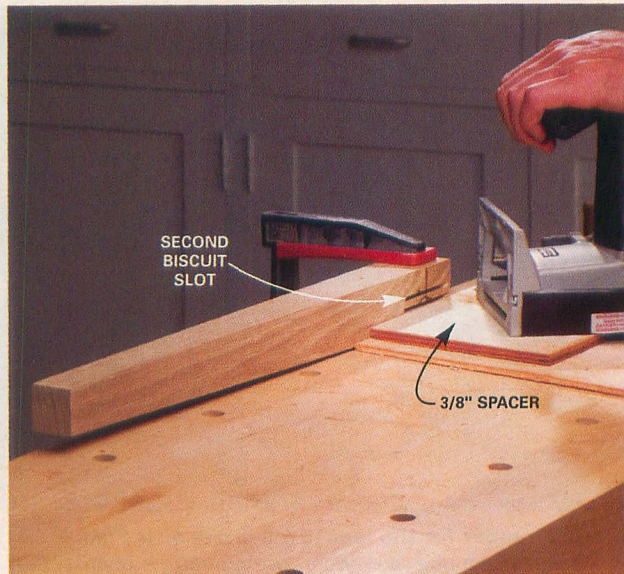
Cut the aprons (B) to final size. Cut the decorative groove on the bottom outside face (Fig. A) on your tablesaw using a standard 1/8-in. kerf saw blade. The groove is also a handy way to keep track of the outside face of the aprons during the upcoming biscuit-cutting



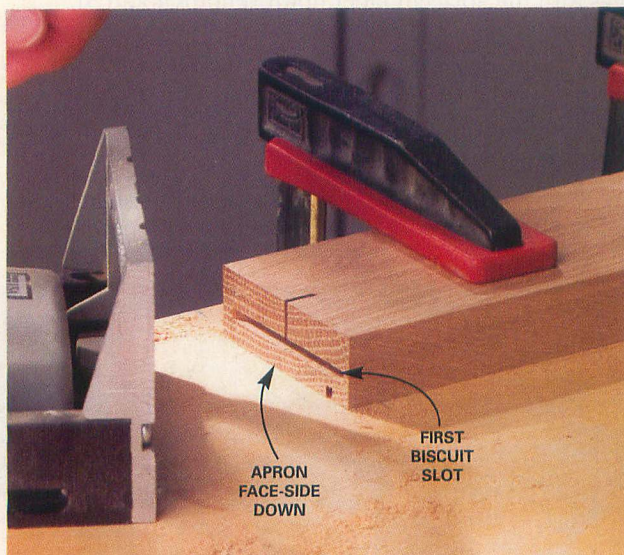
3 Smooth the tapered sides with your jointer. A freehand bandsaw cut can be fairly uneven, so smoothing might take two passes. Feed the legs top-end first. Use a push block and stick to guide the leg.



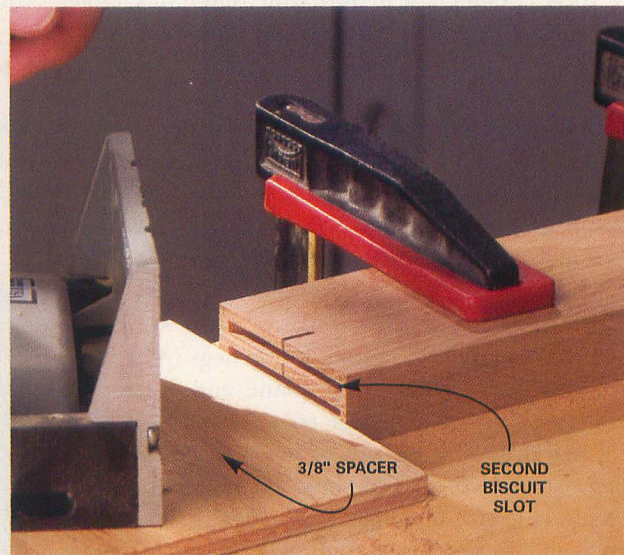
4 Cut a pair of biscuit slots in the legs. To center the apron on the leg, use a 1/4-in. spacer for the first slot. To avoid a costly mistake, always clamp each leg with a tapered side down. Only cut the slots in faces marked with an X.



5 Cut the second biscuit slot in the legs. Add a 3/8-in. spacer on top of the 1/4-in. spacer. Spacers are far easier to use than fiddling with the biscuit joiner's fence when you're making these double slots.



6 Cut biscuit slots in the aprons' ends. Clamp the apron face-side down. That's the side that has a decorative groove cut into it. This time, cut the first slot without the 1/4-in. spacer.



7 Cut a second biscuit slot with the 3/8-in. spacer under the plate joiner. This is a foolproof system for making the slots in the legs and aprons exactly the same distance apart.

steps. With the decorative groove facing down, cut the double biscuit slots in the ends of the aprons. Cut the first slot without any spacer and the second one with a 3/8-in. spacer (Photos 6 and 7).

ASSEMBLE THE BASE

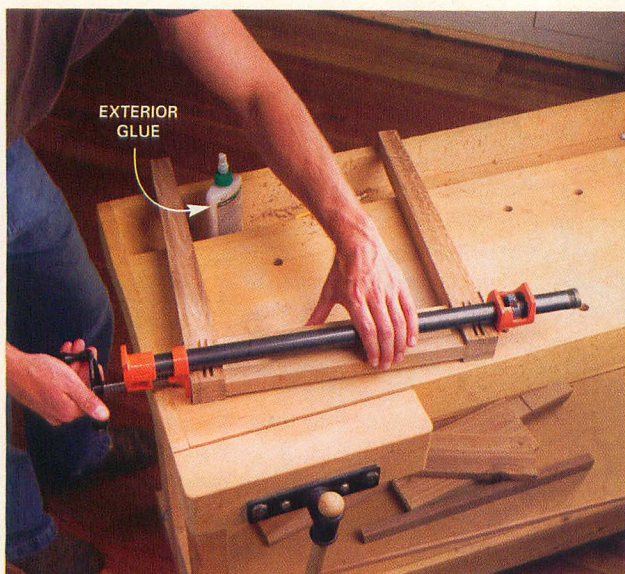
First make two leg assemblies by gluing two legs and one apron together, then the other two legs and an apron (Photo 8). Make sure the decorative groove on the apron is facing out. Use an exterior glue for this project (see

Sources, page 64). After the glue has dried, complete the table base by adding the other two aprons (Photo 9).

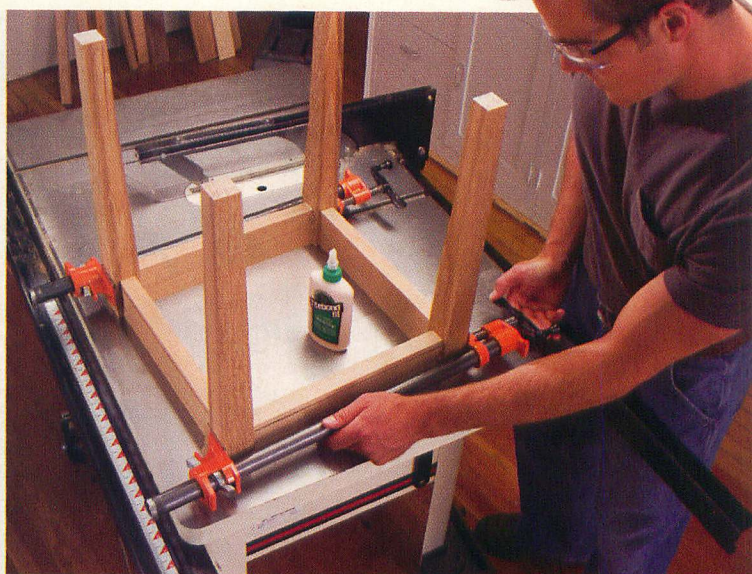
ADD THE TABLETOP

With your chosen tile in hand, use the information in the Cutting List's notes, page 60, to determine the correct lengths for the tabletop parts (C, D and E). Make these parts and mark centerlines for the biscuit slots on their ends (Fig. A, page 60).

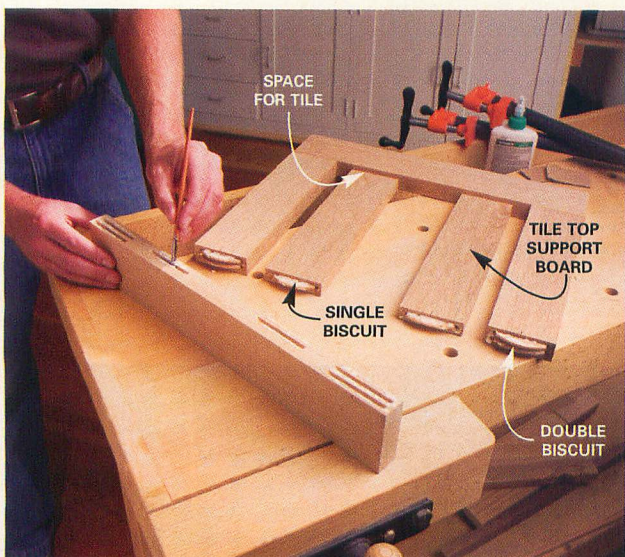
Cut the double biscuit slots in the outer frame boards (C and D) with their top sides facing up during slot cut-



8 Assemble the table base in stages. Glue together two legs and one apron using exterior glue. Make sure both legs lie flat on your bench. Repeat this step with the other pair of legs and apron.



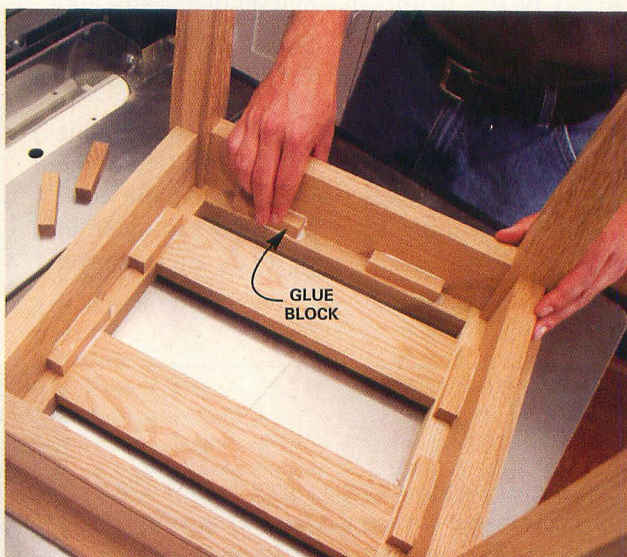
9 Assemble the entire table base. Work on a level surface, such as the top of your table saw. This will ensure the finished table won't wobble. Working upside down also prevents excess glue from dribbling down the legs.



10 Assemble the top. A small paintbrush works great for applying glue to the biscuits and slots. The tile top of this table rests on support boards that are thinner than the rest of the frame. The tile top's support boards are connected with only a single biscuit.

ting. Cut the bottom slot without using any spacer and the top slot using the 3/8-in. spacer. The tile support boards (E) are thinner and sit 1/4-in. below the surface of the outer top frame boards. This offset provides room for the tile. The support boards are joined to the long tabletop frames (C) with only one biscuit at each end. Cut slots for these biscuits with the supports' top side facing up and without using a spacer.

Next, glue and clamp the top (Photo 10). After the base and top sections have thoroughly dried, give these



11 Fasten the base to the top with glue blocks. This table doesn't use any metal screws or brackets that can rust out. You don't have to clamp these blocks. Just rub them hard back and forth to squeeze out the glue, and then hold them in place for a few seconds until the glue gets tacky.

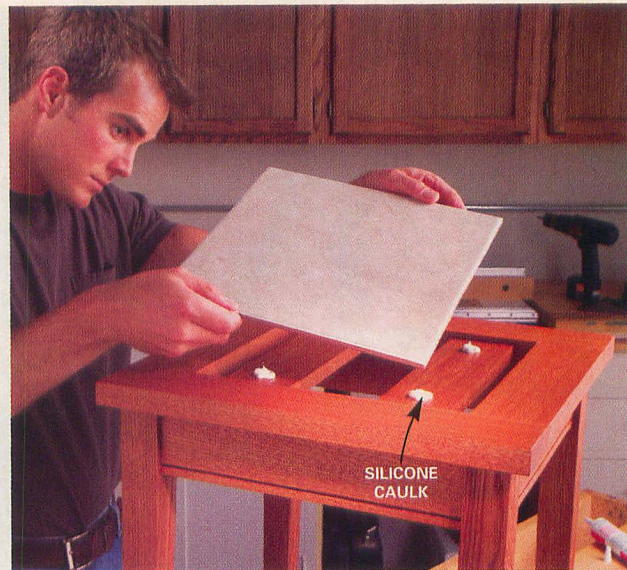
assemblies a final sanding. Attach them to each other using glue blocks (F). Apply glue to each block and rub it back and forth several times until you feel the glue take hold slightly (Photo 11). Then put pressure on the block for about five seconds before letting go. Leave the table upside down until the glue is dry.

USE AN EXTERIOR STAIN

We chose to apply exterior stain on our table. Exterior stain is very easy to apply with a brush or a rag



12 Finish the table with an exterior stain. Let it dry thoroughly before you install the tile top.



13 Install the tile top using four spots of silicone caulk. Make sure the stain is completely dry before you install the tile, or the caulk may not stick to the support boards.

(Photo 12). Be sure to work in a well-ventilated area and use the appropriate safety equipment. The exterior stain needs to be renewed every year or two, but it won't peel or crack like varnish.

When the stain is completely dry, glue the ceramic tile in place using silicone caulk (Photo 13). Center the tile so there is a 1/16-in. space between it and the wood frame. This space provides a place for rainwater to drain away. Now you're all set for a lazy afternoon on your deck.

Sources

Groff & Groff Lumber Inc.
(800) 342-0001
www.groffslumber.com
3/4 white oak, \$4 per bd. ft.
5/4 white oak, \$3 per bd. ft.

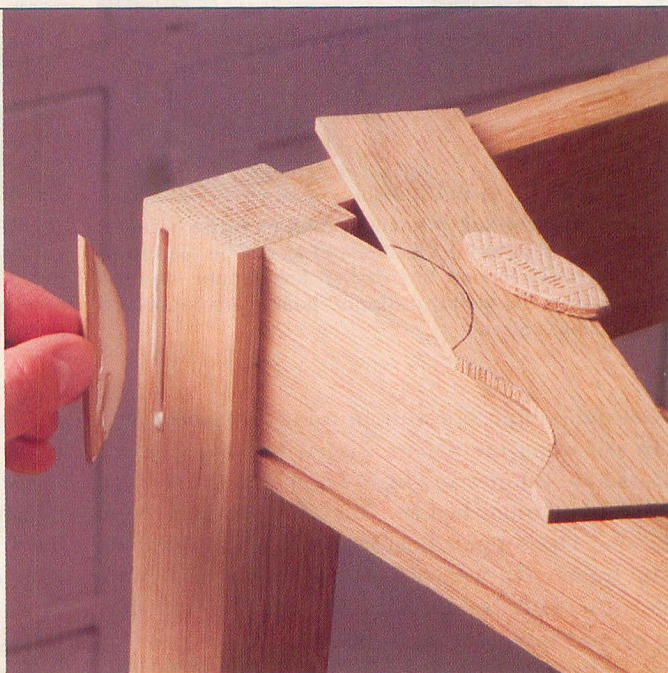
Woodcraft Supply
(800) 645-9292
www.woodworker.com
Exterior glue, Titebond III Glue,
16 oz., \$8.

Cabot's Stain
(800) US-STAIN
www.cabotstain.com
Australian Timber Oil,
Mahogany Flame, #3459,
1 quart, \$15 to \$18.

Oops!

We were making such great progress, but we lost track of which side of this leg was tapered and cut a biscuit slot on the wrong side. Rather than make a whole new leg, we decided to repair the mistake. If you make a similar mistake, here's how to fix it.

Find a piece of wood that matches the color and grain of the leg you're repairing. Plane the piece of wood to fit the biscuit slot. Trace half the outline of a biscuit, making your outline about 1/16 in. larger than the biscuit's outline. Cut out this "half-biscuit" on your bandsaw or scrollsaw and test its fit. The half-biscuit should fill the slot from end to end and stand a little proud of the leg's surface. Glue the half-biscuit into the slot. When the glue is dry, sand the half-biscuit flush with the leg. If you do a good job of matching grain, the repair should be hardly noticeable—and it sure beats making a whole new leg. **AW**



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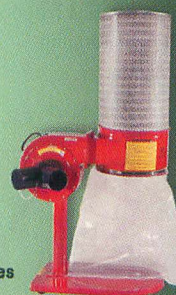
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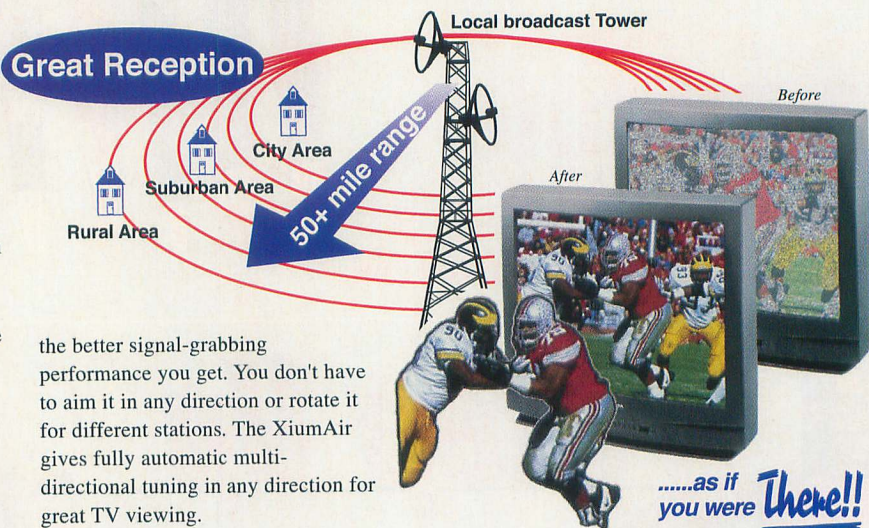
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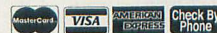
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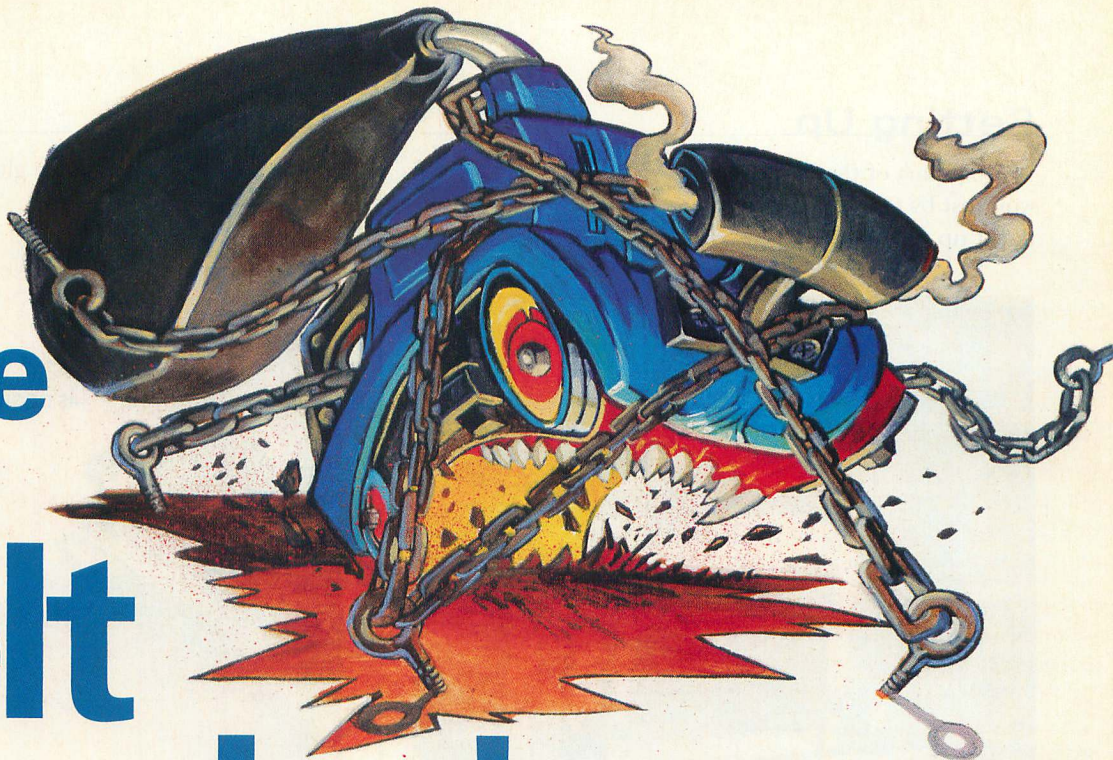


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Tame Your Belt Sander!

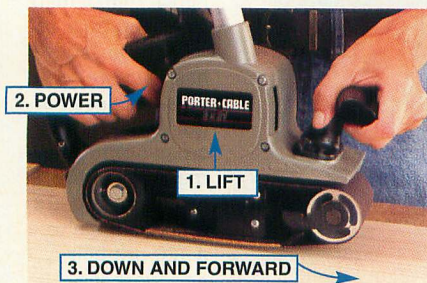


Get that menacing belt sander under control with these whip-it-into-shape tips. *by George Vondriska*

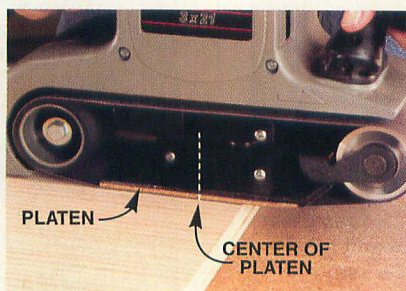
Does the prospect of using a belt sander make your palms sweat and your hands shake? I feel your pain. Belt sanders have a bad rap as the quickest way to ruin a project. Use them incorrectly and your project starts to look like the rolling hills of Ireland. But used correctly, they're a great tool for flattening panels, flushing up trim and face frames and getting to the finish line fast.

- Start by learning the belt-sander rules of the road:
- Keep it moving. The slightest pause can form a gouge.
- Let the weight of the sander to the work. Don't lean on the machine.
- Use nothing but 120-grit paper until you're comfortable with the machine.
- Don't overextend yourself. Running a belt sander at your reach's extreme end is a sure way to gouge material.

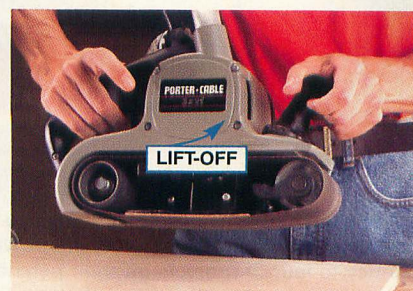
Handling the Sander



1 Start with a soft landing. Before you pull the trigger, lift the sander slightly off the workpiece. Squeeze the trigger as you ease the sander down and forward, feathering it into the material. Think of it as an airplane making a smooth landing.



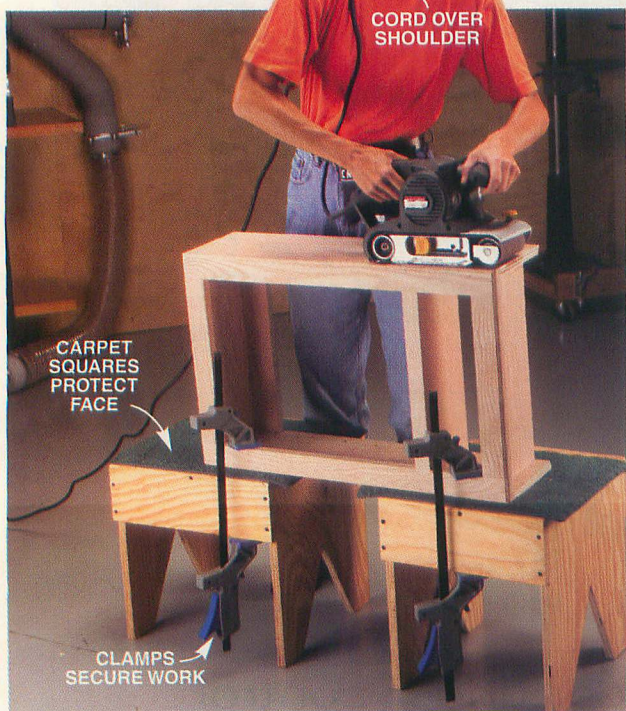
2 Go over the edge, but only a little. As you sand to an edge, allow the platen to project over the corner, but never by more than half its length or width. This keeps the sander balanced and flat.



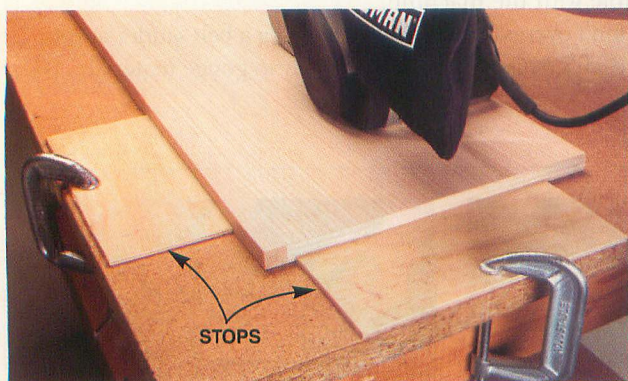
3 End with a smooth take-off. OK, you've successfully landed your sander and finished sanding. Now it's time to take off. On your last stroke, lift the sander as it moves forward. Then release the trigger.

Setting Up

A big part of the battle is won just by taking the time to set up properly.



Get the height right. The surface you're sanding should be slightly lower than your waist. This puts your arms at a comfortable working height. For some projects, like cabinets, it may mean working on a surface other than your workbench. Make sure the piece you're sanding is secure. It's also good practice to keep the cord out of the way by draping it over your shoulder. It looks weird, but it prevents frayed cords—and nerves—from belt-sanded wires.



Provide solid stops. You can't sand a piece that you're chasing around the shop. Belt sanders are powerful and have a tendency to launch projects off their perches. Be sure your material is trapped against stops that are firmly clamped to the bench. Clamping the material itself to the bench is a hassle because the clamps get in the way. The stops should be thinner than the material you're working on and wide enough so the sander won't bump into the clamps.

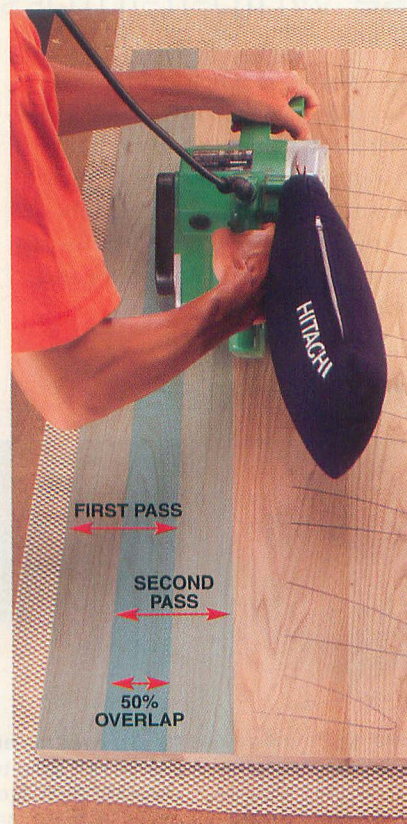
Trueing Up

A belt sander can flatten a glued-up panel in no time.



1 Sand diagonally first. Flatten a solid wood panel by first sanding at 45 degrees to the grain using an 80-grit belt. This helps level the high spots that often occur at the joints. Use a straightedge to check the panel, working the angles in a criss-cross fashion until it's flat.

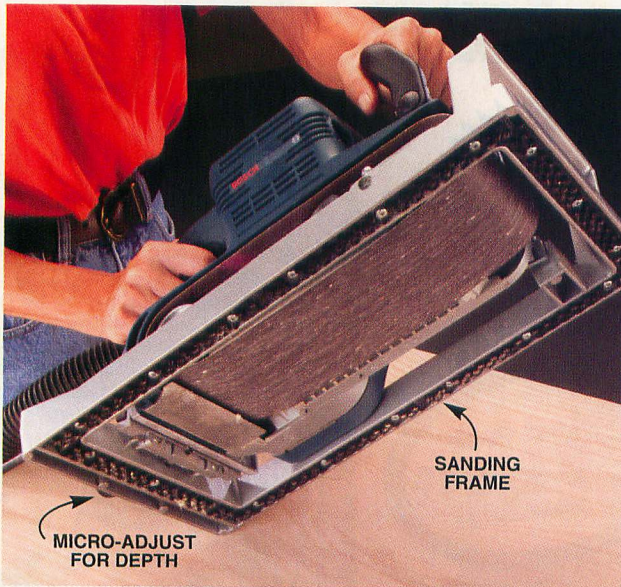
Note: Never sand plywood at an angle.



2 Then go straight. When the panel is flat, sand parallel to the grain, using the same 80-grit belt, until the cross scratches from your diagonal sanding are gone. Each stroke of the sander should overlap the previous stroke by half a belt width. Pencil marks help you keep track of where the sander has been and where it needs to go. When the cross-grain marks from the previous step are gone, change to a 120-grit belt and work the entire panel again.

Tooling Up

It's a poor craftsperson who blames the tool, but it's hard to get good results from a prehistoric belt sander. Here's what to look for in a new belt sander.

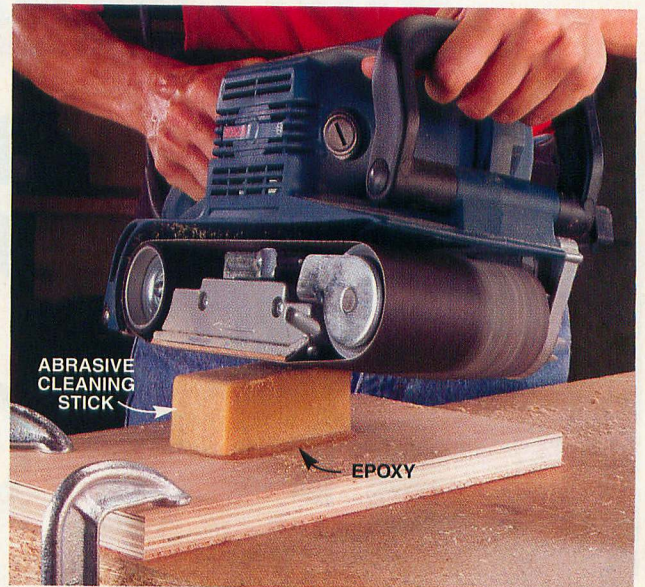


Eliminate gouging with a sanding frame. A sanding frame (\$50 to \$80) is like training wheels for a belt sander. Unlike training wheels, you'll never want to remove the sanding frame. A slick surface on the bottom of the frame rides on your material, and the sander is suspended within the frame. This is a no-experience-required way to keep the sander under control and dead flat. Some frames even have micro-adjust knobs that allow you to control how much material the sander is taking off.

Frames really shine when you're working on large surfaces. Not every belt sander is made to work with a frame, so if you're buying new, it's a feature to look for.

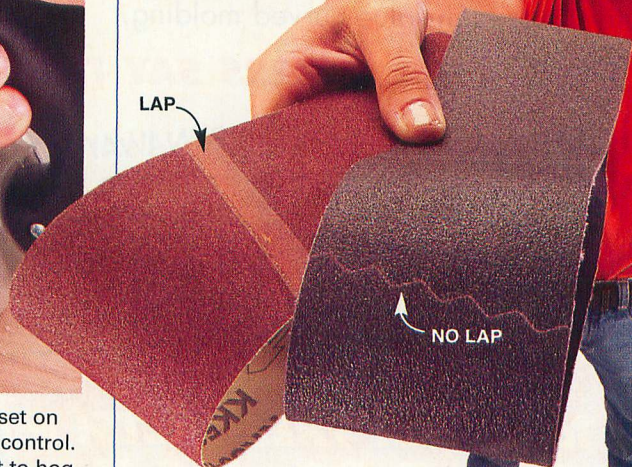


Variable speed gives you better control. A belt sander set on low speed and equipped with a fine-grit belt is easy to control. It's especially useful on veneered materials. If you want to hog off barrels of sawdust quickly, switch to a higher speed.



Clean belts = better results. An abrasive cleaning stick, epoxied to a board and clamped nearby, will keep your belt clean and working hard. Abrasive cleaning sticks act like an eraser for sandpaper. At less than \$10 per stick, it's a lot less expensive to frequently use the cleaning stick than to frequently change paper.

Get the right belt. Look for no-lap belts for your sander. The seam is a butt joint with high-strength tape holding the back of the joint together. Belts with lap joints tend to have high spots that go thump, thump, thump, as you sand, which makes controlling the sander more difficult. **AW**



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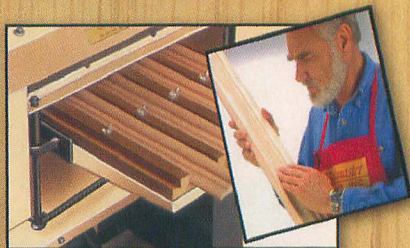
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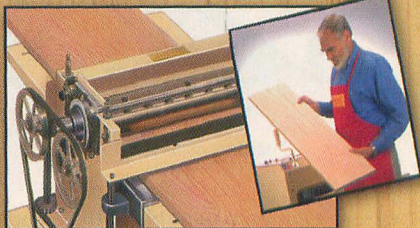
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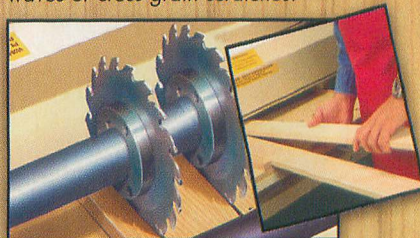
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Easy setup makes all the difference

You're about to be marooned on a desert island. You're allowed one power tool to take with you. Which would it be?

My choice would be a bandsaw.

After the router, a bandsaw is the most versatile tool in a woodshop. It can cut straight or curved lines; it can turn logs into lumber or make precision dovetails. Of course, you must pick the right blade for the job, and then set the guides just so for each blade—without losing your patience. We all like lots of power. It's really handy for the big stuff.

Shopping for a saw that can do all these jobs can drive you nuts, however. The choices are overwhelming. For any amount you're willing to spend, there's another machine that costs only \$100 more—or \$100 less.

To help you, we've undertaken the most comprehensive bandsaw test we've ever done. In this issue and the next, we'll look at 14-in. and larger saws that cost less than \$1,500. In this issue, we'll review 19 saws that cost less than \$1,000. Their wheels range in size from 14 to 17 in. and their motors are between 3/4 and 2 hp. In the next issue, we'll tackle 13 more-expensive bandsaws.

This test has three parts. First, we'll review the important features any bandsaw should have. Second, we'll take a close look at individual models. Last, you'll find a chart with side-by-side comparisons and recommendations for saws in four price ranges.

PART 1
saws
under
\$1000

Tool Test Bandsaws

by Tom Caspar

FEATURES TO CONSIDER

Bandsaws are used in so many ways that every woodworker has a slightly different take on which features matter most. Whether you're rough-sawing curved parts, cutting joints or resawing door panels, here's the short list of points to check.

WHEEL DIAMETER

Wheels come in different sizes, from 14 to 18 in. diameters. Blades as wide as 5/8 in. are fine on a 14-in. wheel; wider blades for resawing last longer and have more traction on larger wheels.

TENSION RELEASE LEVER

Move this lever to relax the tension on a blade after a day's work. It's the best new feature that makes a saw more convenient to maintain.

PRICE

More money generally gets you more power, but other features, such as the guides, may be the same on a less-costly model.

GUIDES

Upper and lower guides hold the blade straight. Your choice among the many types of guides depends on which blade size you use most.

CAPACITY

The clearance under the guides determines how tall a board you can resaw. Capacity is fixed on welded-steel saws (right). You can increase it from 6 to 12 in. on many cast-iron saws (left) by adding a riser block.

TABLE

Look for a big, sturdy table if you saw heavy timbers and logs.

FRAME

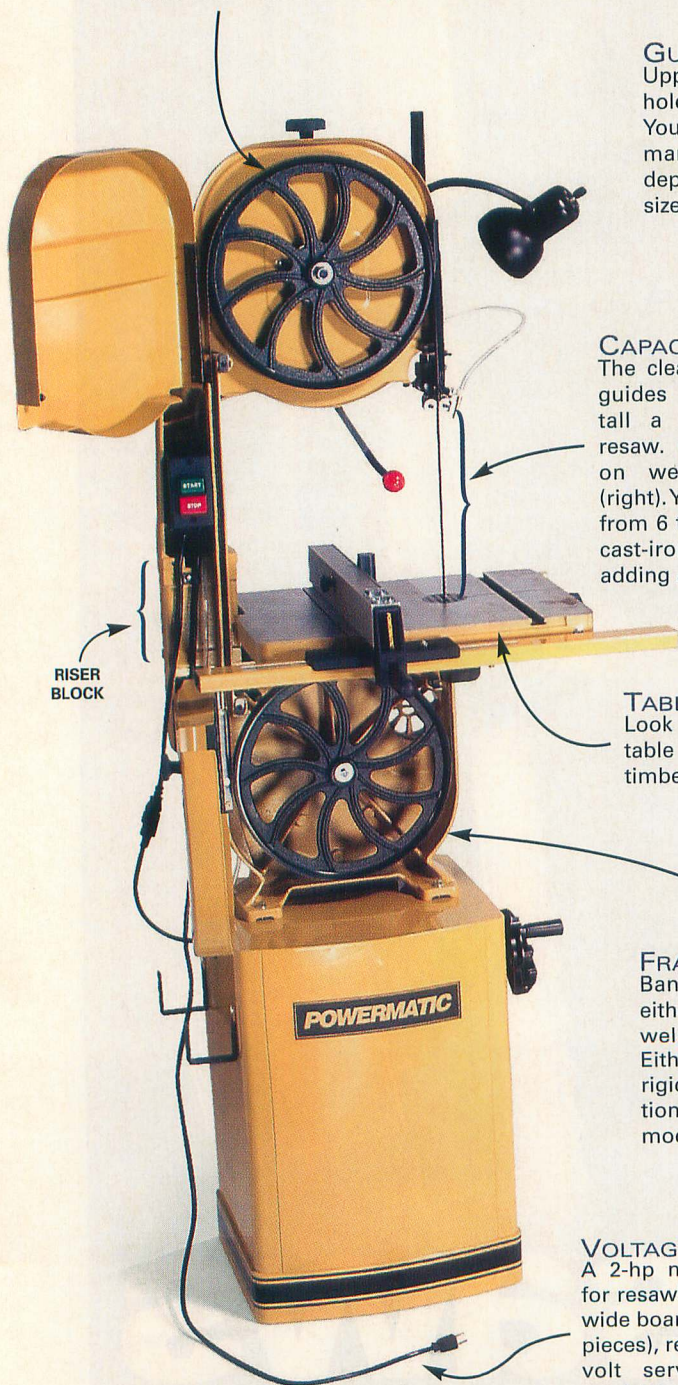
Bandsaw frames are either cast iron (left) or welded steel (right). Either type can be very rigid and free of vibration, depending on the model.

VOLTAGE

A 2-hp motor, ideal for resawing (ripping wide boards into thin pieces), requires 240-volt service. (This model is a 1-1/2-hp, 120-volt machine.)

POWER

For general work, 3/4- or 1-hp motors are fine. Look for a 1-1/2- or 2-hp motor for the best results when resawing boards over 6 in. tall.



KEY FEATURES

GUIDE SYSTEMS

The biggest pet peeve among bandsaw users is blade guides that are a pain to adjust. We gave this factor a lot of weight in our ratings.

Blade guides are located both above and below the table (see photos, right). For an accurate cut, it's equally important to set both correctly—even more so the smaller the blade you use.

How often do you have to adjust the guides? For best results, you should change blades to cut curves of different sizes and wood of different thicknesses. That means changing the guide settings, too. However, many bandsaw owners rarely fiddle with the guides, making do with a single size blade for almost all their work.

If you're a fastidious woodworker who'll switch back and forth between blades, look for a guide system that we rate as easy to adjust. We believe that the more complicated the design of the guide system, the less likely you'll set it right. If you don't mind getting by with one blade, any guide system will work.

A good guide system is a combination of two things: the guides themselves and the adjustment mechanism that holds them. Guides come in three types: block, bearing and disc. Which type is right for you depends on the range of blade **sizes you use** and your level of patience (see "Types of Bandsaw Guides," page 75).

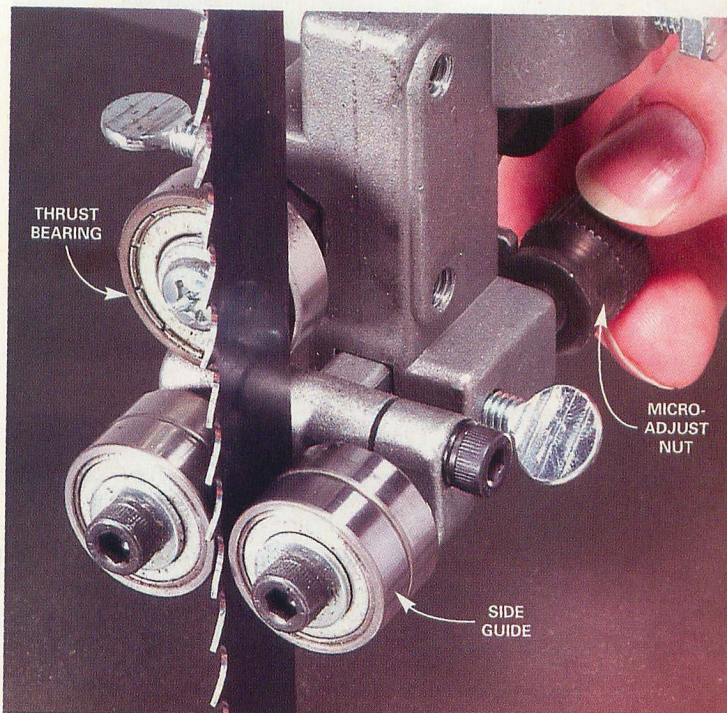
We prefer an adjustment mechanism that moves the guides and thrust bearing independently. (A thrust bearing sits directly behind the blade, preventing the blade from bending backward.) On saws without an independent system, you must remember to set the guides first, then the thrust bearing. One setting depends on the other. That can be frustrating.

We also prefer saws that have easily accessible micro-adjust nuts or cams for positioning upper and lower guides and thrust bearings. On saws without micro-adjust nuts, you must manually push or pull the guides and bearings into place.

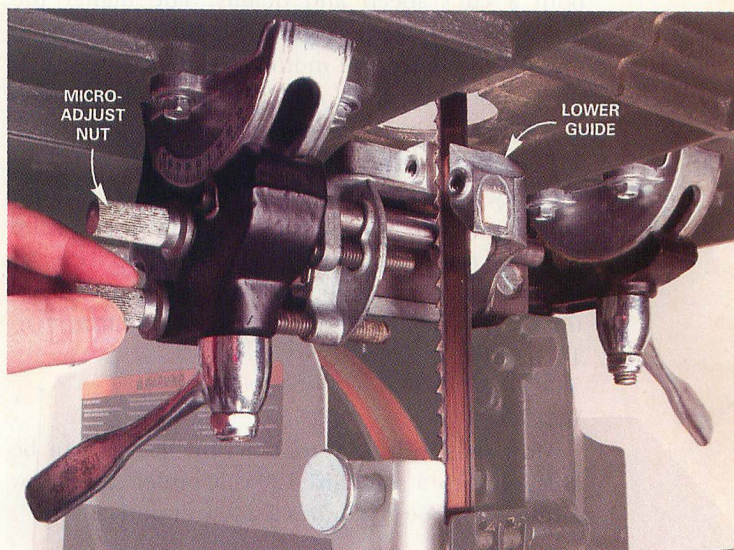
HORSEPOWER

If you want to cut lots of thick stock, go for power above all else. If you won't cut big stuff often, easy-to-adjust guides are more important.

Motors range from 3/4 to 2 hp. More horsepower generally costs more money. Power affects



Easily adjustable blade guides are mighty convenient when you switch blades for different jobs. We prefer micro-adjust nuts that let you dial in how close the guides are to the front of the blade. We also prefer a system that lets you independently move the thrust bearing either before or after setting the guides.



Lower blade guides are often overlooked in all the stuff under the table. They should be easy to adjust, too, because they're as important as the upper guides. We prefer lower guides that are high up and relatively close to the table, because that minimizes the length of unsupported blade. This is particularly important with 1/4-in. and smaller blades.



MIKE KRIVIT

More power yields the best results when resawing. You get a smoother cut because you can maintain a constant feed rate. All bandsaws have plenty of power for work less than 2 in. thick, but you really notice a difference sawing boards 6-in. thick or more. For resawing, look for a saw with 1-1/2 to 2 hp.

both a cut's speed and quality. The higher the horsepower, the faster you can feed thick stock without slowing down the motor (see photo above). If the motor bogs down or stalls, the blade wanders and makes an irregular rough cut.

For sawing hardwoods less than 2 in. thick, 3/4 hp is plenty. You can resaw wood of any thickness with a 3/4-hp motor, but you must carefully monitor the feed rate to keep the motor turning at top speed. A 1-hp motor is much better for wood up to 6 in. thick. Look for 1-1/2 to 2 hp to cut wood from 6 to 12 in. thick.

VOLTAGE

Most saws with 3/4- to 1-1/2-hp motors can be plugged into a standard 120-volt outlet. Every saw with a 2-hp motor requires a 240-volt outlet.

FRAME AND BASE STYLE

The rigidity of a saw's frame and base really counts when you're cutting big, heavy stuff. You want the table to stay put, not wiggle. Bandsaws have cast-iron or welded-steel frames (see "Features to

Consider," page 72). The most stable saws have a welded-steel column that runs to the floor.

Some saws with a separate base have an annoying front-to-back shake when you cut thick wood. It's most pronounced on saws with open stands. The amount a closed-stand machine shakes depends on how much the base's top is reinforced.

Frame style in general, though, doesn't affect how much the upper wheel flexes under a load, or the vibration and noise levels, which vary widely.

RESAW CAPACITY

If you want a saw that's ready for any job, look for one with a 12-in. maximum resaw capacity. For most work, 6- to 8-in. capacity is plenty. But once in a while, you may wish you had more. Woodturners prefer 12 in. of resaw capacity for making large bowl blanks from logs.

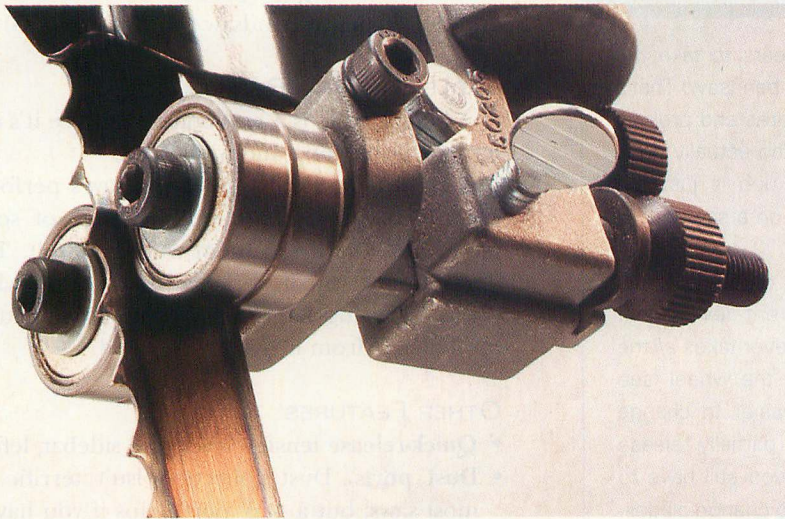
Welded-steel saws have a fixed capacity, but 14-in. cast-iron saws are more flexible. Their capacity can be increased when you need it. At the base prices we list, cast-iron saws have a 6-in. capacity. This can be increased to 12 in. by inserting a riser block. Add the riser block's cost (\$50 to \$100 extra) when you compare saws by price. Unfortunately, riser blocks aren't available on some cast-iron saws.

WHEEL DIAMETER

Power, capacity and price don't necessarily increase with the size of a saw's wheels. Some 14-in. saws have very powerful motors, for example. A 16-in. saw may have less capacity than a 14-in. saw with a riser block, and cost less, too.

So what do you get with bigger wheels? Clearly, you get a bit more throat capacity left of the blade, but that's not a big deal. The most important advantage of a wheel over 14 in. is being able to easily run big, wide blades for ripping and resawing. You get more traction and transmission of power with a large-diameter wheel, because the blade contacts more surface area than on a small-diameter wheel.

Thick blades last longer on large wheels. Most blades up to 1/2 in. wide are 0.025 in. thick. Most 3/4-in. and wider blades are 0.032 in. thick or more. Carbide-tipped blades are often extra-thick, too. Thick blades are prone to prematurely breaking from metal fatigue on 14-in.-dia. saws because they're constantly *bent around* a wheel



What keeps a bandsaw blade from twisting or wandering side to side? It's the guides. They may be small, but they're a critical part of any bandsaw.

You've got a choice of three different types of guides: block, ball bearing and disc. Ideally, guides should be easy to set up, support the full width of a large blade and require little or no maintenance.

BLOCKS

Blocks are the most versatile guide. They're our pick for a saw that's often asked to run both narrow and wide blades. There are four types:

Steel. Steel blocks can dull a blade's teeth if they touch, so setup is tricky with 1/4-in. and smaller blades.

The faces of steel blocks are long-lasting, but you must occasionally redress them to stay flat. They can be tedious to file or grind.

Polymer. These blocks won't dull a blade, but they wear quickly. They're easy to redress.

Phenolic. Sold under the trade name "Cool Blocks" (and shown below), these are our favorite because they're so forgiving to set up. They won't harm a blade's teeth. On small blades, you can set them right up to or on top of the teeth. They wear slowly and are easy to dress flat.

Ceramic. White ceramic blocks are low maintenance because they don't wear down. They'll dull a blade's teeth if they touch them, though, so they're hard to set up with

small blades. They also make small but harmless sparks.

Most blocks are interchangeable. We recommend replacing steel and polymer blocks with phenolic ones. They cost about \$12 for a set of four, and are available from Iturra Design, (888) 722-7078. Ceramic blocks are also available from Iturra at \$16 a set of four.

BALL BEARINGS

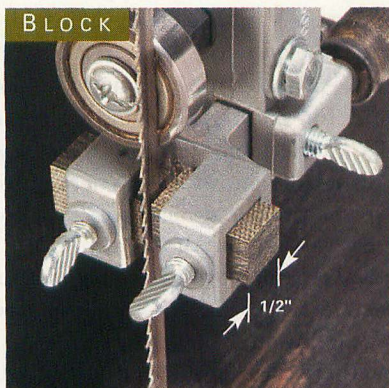
The primary virtue of ball bearing guides is that they're low maintenance. Their faces spin and can't wear down. Setting these guides is very easy on wide blades, but on narrow blades you must be careful to avoid contacting a blade's teeth.

Ball bearings come in three sizes. The most important difference is how much support they offer a blade. Stacked and large bearings do a better job than small bearings on wide blades.

DISCS

Discs' best feature is the huge amount of support they offer a blade. Their faces are hardened, so they shouldn't require redressing. They must be set away from a blade's teeth.

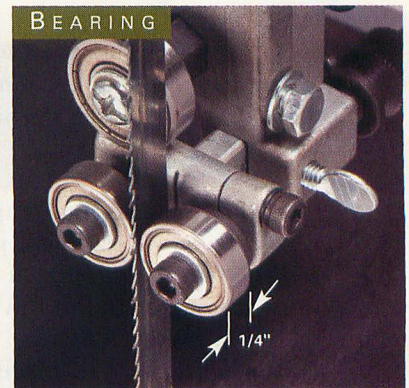
Discs have two disadvantages. They're hard to position on 1/4-in. and smaller blades. They can also wear inside their shafts, causing them to wobble or freeze. Discs must be replaced as a whole unit.



Block guides support a blade up to 1/2 in. deep. This width is important for steadying wide blades.



Disc guides can use their full diameter to support the blade.



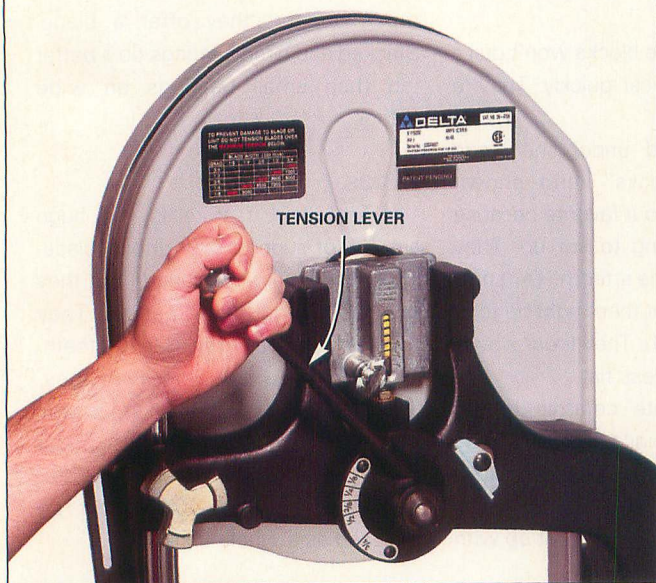
Small ball-bearing guides support 1/4-in. worth of blade. Stacked bearings (see photo, top of page) double that support.

WHAT'S THE DEAL WITH QUICK-RELEASE TENSION LEVERS?

Woodworkers have been told for years to take the tension off the blade after using a bandsaw. That's supposed to prevent flat spots on your tires and prolong the life of your blades. Reality check: Who actually does this? Turning and turning the tension knob is just too much trouble, particularly when it's high on a saw with a riser block.

Manufacturers have been listening to our complaints. They've introduced a number of different levers that quickly reduce tension. The best type of lever takes *all* the tension off the blade, so it's loose from the wheel (see Chart, page 84). This makes it much easier to change blades—a huge bonus. Other levers only partially release blade tension. That helps the tires, but you still have to turn an awkwardly located tension knob to change blades.

Speaking of tension knobs, why doesn't anyone install a crank instead? A crank is much easier to turn and is the next best thing to having a quick-release lever.



that's too small. They're better suited for 16-in. or larger saws. (For thin 3/4-in. blades suitable for 14-in. saws, call Suffolk Machinery, 800-234-7297).

BLADE CAPACITY

Most saws claim to take up to a 3/4-in. blade, which many woodworkers prefer for resawing. It's true that they do fit, but that's not the whole story. It's impractical to run most 3/4-in. blades on 14-in. saws, because they're too thick. Fortunately, a 3/4-in. blade is not a must for resawing. Yes, it's less prone to bending in the cut than a narrower blade, but you can get very good results with 1/2- and 5/8-in.-wide blades.

At the other extreme, all saws can handle 1/8-in. blades, but some guides are easier to set than others (see "Types of Bandsaw Guides," page 75).

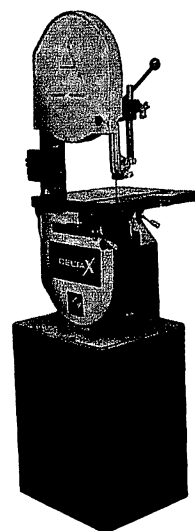
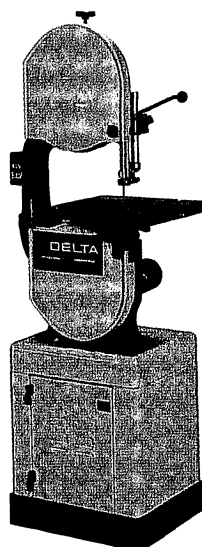
TABLE SIZE AND RIGIDITY

A bigger table is a real bonus, because it's easier to support long and wide stock.

A rigid table helps improve a saw's performance. Press down hard on the edge of some tables and you'll see them wobble or tilt. This doesn't affect small work but does matter when you're resawing large, heavy timbers or cutting bowl blanks from heavy, green wood.

OTHER FEATURES

- **Quick-release tension lever** (see sidebar, left).
- **Dust ports.** Dust collection isn't terrific on most saws, but a 4-in. port helps if you have a large dust collector. Smaller, 2-1/2-in. ports don't work very well. Two ports are better than one. The upper port, located below the table, strips dust directly from the blade. The lower port cleans the bottom of the wheel cavity.
- **Motor upgrade.** You can soup up many 3/4- and 1-hp saws with a more powerful, similar-speed motor when your budget allows. Upgraded motors generally aren't available from manufacturers, however. Before you upgrade, ask the manufacturer whether the machine can handle extra power. You'll have to match the mounting plate and pulley size. Also, match the switch's horsepower rating and cords' amperage to the new motor. Some motors have special mounts that are difficult to replace.
- **Fence.** Many saws come with a fence that's suitable for short joinery cuts. None are ideal for ripping or resawing because, with most blades, you must slightly angle the fence to cut a long, straight line. We're disappointed that these fine fences can't be easily adjusted to compensate for blade drift.
- **Easy left tilt.** All tables tilt left and right. Left tilt is useful for cutting dovetails or angled tenons. To tilt a table left on most saws, though, you must remove the 90-degree stop and reset it when you're done. Some saws have stops that easily swing out of the way.
- **Two speeds.** Some bandsaws have an additional low speed that's useful for resawing wood and cutting aluminum. You get more torque in low gear, so there's less strain on the motor. It's easier to maintain a steady feed rate. That's a big plus for 1-hp or smaller saws. For wood, slowing down the blade often produces a more corrugated surface, however.



DELTA GROUP

	DELTA 28-276	DELTA 28-206
• Price:	\$500	\$600
• Power:	120 volts, 3/4 hp	120 volts, 1 hp
• Maximum resaw capacity:	12 in.	12 in.
• Wheel diameter:	14 in.	14 in.

PROS

Delta bandsaws have consistently ranked well for user-friendliness in our tool tests. These two models continue that tradition and slightly edge out comparable machines from Jet. (However, we'd be happy to buy either brand for a discounted price.) Both Delta saws are essentially the same above the base. Setting the blade guides and thrust bearings is a breeze. Only Delta bandsaws have lower-guide micro-adjust knobs located front and center under the table, where they're easy to reach. The lower blade guides on all Delta 14-in. saws are positioned much higher up and closer to the table than most other saws' guides. This minimizes the length of unsupported blade, so there's less chance it will bow or twist. Both saws feature quick-release tension levers and 4-in. dust ports.

CONS

All Delta saws come with steel guide blocks. We'd switch right away to phenolic Cool Blocks (\$12). You need an Allen wrench to set the guide blocks. Reaching the lower ones requires some dexterity. Vibration transmitted from the motor on the closed-base model can be a problem. (The motor isn't bolted down; it pivots and hangs from the drive belt, like a contractor's saw.) On both models, the table isn't very rigid. The base on the closed model could be better reinforced to prevent the frame from shaking when cutting big stuff. Delta's riser-block kit (\$100) is more expensive than others' kits.

DELTA 28-475X

- Price: \$900
- Power: 120 volts, 1-1/2 hp
- Maximum resaw capacity: 12 in.
- Wheel diameter: 14 in.

PROS

This versatile saw is our favorite 120-volt machine. It's equally good at resawing and detail work. On the outside, this saw looks like an upgrade of the other two Delta models, but it's not the same machine. It's made to higher standards in a different factory. Two outstanding features of this saw are its powerful motor and excellent quick-release tension lever. This is the only lever that automatically adjusts to different blade sizes. In addition, the table is more rigid than those of the other Delta models. The Powermatic PWBS-14CS, with more built-in accessories, is a close second choice for the best 120-volt saw, but the Delta feels as though it delivers more power.

CONS

The price tag for versatility is quite high. Most of the bugs were worked out of this saw a long time ago, but we'd quickly replace the steel blocks with phenolic Cool Blocks. Setting the spacing of the guide blocks requires an Allen wrench, and the lower ones are awkward to reach. (Other saws use thumbscrews.)



JET GROUP

JWBS-14OS

JWBS-14CS

JWBS-14X

• Price:	\$530	\$575	\$715
• Power:	120 volt, 3/4 hp	120 volt, 1 hp	120 volt, 1-1/4 hp
• Maximum resaw capacity:	11-3/4 in.	11-3/4 in.	11-3/4 in.
• Wheel diameter:	14 in.	14 in.	14 in.

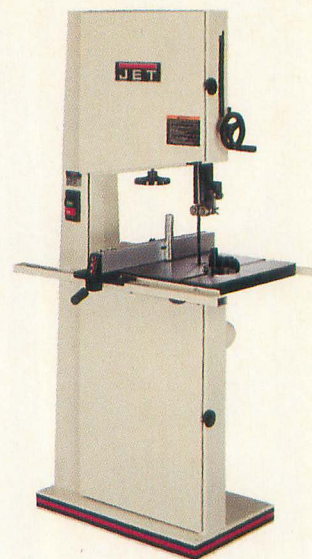
PROS

All three of these Jet models are fine general-purpose saws. The major difference among them is horsepower. All three have guide systems that don't require tools to adjust and are fairly easy to set up.

The 14OS and 14CS models are priced about the same as their Delta counterparts, the 28-276 and 28-206. Picking between the two brands is a close call. Your best bet is to wait for a rebate or sale price and buy the less-expensive saw. The JWBS-14X has better dust collection than the other Jet models, stiffer and heavier cast-iron (rather than aluminum) wheels and a quick-release tension lever.

CONS

The guide-system micro-adjust knobs under the table on all three models are awkward to reach. We recommend replacing the polymer guide blocks on all models with phenolic Cool Blocks. The guide blocks' thumbscrews have small heads that are hard to grasp, and those holding the upper guide blocks obscure your line of sight. The quick-release tension lever on the JWBS-14X doesn't fully release the tension, so you still have to turn the tension knob to change blades. It's similar in design to the Grizzly G0555.



JET JWBS-16

- Price: \$875
- Power: 120 volt, 1-1/2 hp
- Maximum resaw capacity: 10 in.
- Wheel diameter: 16 in.

PROS

This sleek-looking saw has a sturdy frame and can easily take a wide blade. It only requires 120-volt power. The table is large and stiff. A crank adjusts the height of the guide post, and an easily accessible wheel located below the upper frame adjusts tension.

CONS

Other 1-1/2-hp saws seem to have more guts. The lower guides are very frustrating to precisely adjust front-to-back. Removing the table makes it easier, but that's a pain. It's hard to adequately lock down the small thumbscrews on the thrust bearings.



POWERMATIC PWBS-14CS

- Price: \$900
- Power: 120 volts, 1-1/2 hp
- Maximum resaw capacity: 12 in.
- Wheel diameter: 14 in.

PROS

This powerful saw runs on household current and is loaded with accessories. The list of extras includes a good Carter-brand quick-release tension lever, guides with two bearings per side for extra support on wide blades, a gooseneck light and an effective blower and nozzle to remove dust on top of the workpiece. All that adds up if purchased separately, but you get it all for about the same price as the Delta 28-475X, which doesn't have many of these goodies.

CONS

There's nothing to dislike. The blade guides are maintenance-free, but fussier to adjust than phenolic blocks in a Delta when running a narrow blade. The lower guides aren't as close to the table as in the Delta saws, so there's 1-3/4 in. more unsupported blade. Although there's a quick-release tension lever, you still have to turn a tension knob to change blades.



BRIDGEWOOD BW-14WBS

- Price: \$600
- Power: 120 volts, 1 hp
- Maximum resaw capacity: 8 in.
- Wheel diameter: 14 in.

PROS

This saw has easy-to-adjust ball bearing guides and micro-adjust knobs both above and below the table. It's got a reasonable amount of power. Other features are also up-to-date: You get a first-class quick-release tension lever and a 4-in. dust port.

CONS

Resaw capacity is limited to 8 in. The table is small and not as rigid as we'd like. The largest blade setting on the tension scale is 5/8 in., although the spring can handle a 3/4-in. blade. The guides are single, small bearings. They don't support wide blades as much as other styles of bearings do.



BRIDGEWOOD BW-17WBS

- Price: \$900
- Power: 240 volts, 2 hp
- Maximum resaw capacity: 11-3/4 in.
- Wheel diameter: 17 in.

PROS

This welded-frame saw has plenty of power and a huge resaw capacity. It runs quietly and smoothly, due in part to its heavy, rigid cast-iron wheels. The guides are large-diameter ball bearings. Setting blade tension is very convenient with a hand-wheel under the upper arm, and you get a good quick-release tension lever. There's a rack-and-pinion mechanism for raising and lowering the large blade-guide post. The oversize table is very rigid, perfect for cutting logs into bowl blanks. The saw has two 4-in. dust ports and is one of the few saws with a magnetic switch and thermal-overload protection.

CONS

It looks enormous, but this saw has a footprint no larger than open-base 14-in. saws. (It weighs 286 lbs., however.) The lower blade guides are awkward to adjust. They work fine, but you can't be in a hurry. The table is low at 37-1/2 in.; we'd put this saw on a stout 5-in. tall box as large as the saw's base.



LAGUNA LT-14

- Price: \$950
- Power: 120 or 240 volt, 1-1/2 hp
- Maximum resaw capacity: 8-5/8 in.
- Wheel diameter: 14 in.

PROS

This is one solidly built saw. There's virtually no vibration when resawing at full capacity. The motor is a Baldor, reputed to have a long, service-free life. Extra-wide, maintenance-free ceramic guides offer more support than on any other saw. You can get substitute phenolic blocks from Laguna for 1/4-in. and smaller blades (\$85). Other nice features include heavy cast-iron wheels, a solid table, a magnetic switch and a rock-solid fence. You can buy the saw prewired for 120 or 240 volts. Although it has a single port, dust collection is very good.

CONS

Resaw capacity is limited to just over 8 in., but that's plenty for most work. The ceramic guides occasionally send off small sparks. The dust port is an odd size (3 in.). The stand under the saw shown above is a \$90 accessory. There's one frustrating aspect to this saw: setting the guides. It takes patience. You need three different wrenches to set the lower guides, and you must follow a particular order.

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GRIZZLY G0555

- Price: \$375
- Power: 120 volt, 1 hp
- Maximum resaw capacity: 12 in.
- Wheel diameter: 14 in.

PROS

Here's the saw with the most features for the lowest price. It's easy to set up and can do a reasonably good job cutting thick or thin boards. The motor has enough power for resawing at a reasonable pace. You get easy-to-adjust ball bearing guides, micro-adjust knobs all around, a 4-in. dust port and a fence.

CONS

The short arm of the quick-release tension lever is awkward to pull. It reduces, but doesn't completely release, tension. You still must turn the tension knob to change blades. On our saw, the tensioning spring was almost fully compressed at the 1/2-in. mark. Extra available tension is always handy for tweaking a blade's performance and protecting a saw's frame and bearings from a sudden shock, but this spring doesn't have much slack.



GRIZZLY G1073

- Price: \$625
- Power: 240 volt, 2 hp
- Maximum resaw capacity: 7-5/8 in.
- Wheel diameter: 16 in.

PROS

This is the least expensive saw in our test with a 2-hp motor and a wheel diameter over 14 in. It'll easily handle any 3/4- or 1-in. blade. You don't need any tools to adjust the guides. The table is quite large. The fence is exceptionally sturdy for resawing heavy boards.

CONS

This saw promises a lot for resawing, but the cons outweigh the pros. A few more inches in resaw height would be great, but you can't extend the saw's capacity. Although the table is large, it also flexes easily under a heavy load. The blade guides are small steel rods that don't offer as much support for large blades as other guide systems do. There's no tensioning scale and the dust port is small.



GRIZZLY G0513

- Price: \$750
- Power: 240 volts, 2 hp
- Maximum resaw capacity: 12 in.
- Wheel diameter: 17 in.

PROS

This saw has many, but not all, of the same terrific features as the Bridgewood BW-17WBS for \$150 less. It's the best value saw in its price range. This 2-hp saw has a slightly more powerful motor than the Bridgewood, but it, too, requires 240-volt power.

CONS

You get disc guides with this saw (the Bridgewood has ball-bearing guides). They're slightly harder to set up with small blades. The wheels are not cast iron and are lighter in weight. The power switch isn't magnetic.



CRAFTSMAN 22424

- Price: \$500
- Power: 120 volts, 1 hp
- Maximum resaw capacity: 6 in.
- Wheel diameter: 14 in.

PROS

This is a fine, no-frills machine. For the price, this saw packs plenty of power. Resawing at its 6-in. max. capacity is no problem. Changing blades and setting guides are easy enough, although there aren't any micro-adjust nuts on the guides below the table. The power switch has a removable child-safety key.

CONS

Craftsman doesn't make a riser kit for this saw. The maximum blade capacity is only 1/2 in. The guides are steel blocks, but you could easily substitute phenolic Cool Blocks for easier setup. The table is larger than those on many saws, but not particularly rigid. Dust collection isn't very effective.



GENERAL INTERNATIONAL 90-150 M1

- Price: \$620
- Power: 120 volts, 1 hp
- Maximum resaw capacity: 7-3/4 in.
- Wheel diameter: 14 in.

PROS

This is a good general-purpose saw, with adequate power for its capacity. You don't need any tools to adjust the guides. There's a quick-tension release lever and a crank for raising and lowering the guide-post assembly. This saw is light in weight but the frame is exceptionally stiff.

CONS

This is the only saw with a built-in dust blower and bag, but it doesn't work as well as we'd like. You're better off hooking up a dust collector to the 4-in. port. You don't get a full 12 in. of resaw capacity to complement the width of a portable planer, but you get enough to match the capacity of an 8-in. jointer.



RIDGID BS1400

- Price: \$380
- Power: 120 volt, 3/4 hp
- Maximum resaw capacity: 12-in.
- Wheel diameter: 14 in.

PROS

The best features of this saw are its low price and ready availability (it's sold exclusively at Home Depot). It's a straight-ahead machine: nothing outstanding, but no deal-breakers, either. The blade guide adjustments are tool-free and easy to use. There's a removable child-safety key on the power switch.

CONS

Resawing goes more slowly than on more powerful saws. The saw comes with steel guide blocks. They're OK, but we'd upgrade with phenolic Cool Blocks. Dust collection isn't very effective and the table isn't as rigid as other models. Like other open-stand saws, it shakes more than we'd like when resawing very large boards.



RIKON 10-320

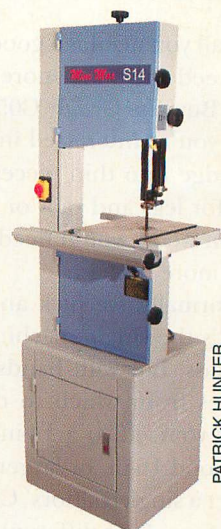
- Price: \$500
- Power: 120 volt, 1 hp
- Maximum resaw capacity: 6 in.
- Wheel diameter: 14 in.

PROS

Rikon's new bandsaw has several innovative features. It has a wide, fairly rigid table with two miter slots, one on either side of the blade. There's 3 in. more support on the right side of the blade than on most other 14-in. saws. You can square the table to the front of the blade with micro-adjust screws. The blade slot in the table faces you, rather than facing right. That makes installing a blade much easier and reduces the risk of kinking. This saw, like a few others, has two speeds. The second speed is quite low, so there's plenty of torque for demanding jobs. That's very welcome on a 1-hp motor. Changing speeds is exceptionally easy. A handy blade selection and troubleshooting chart is posted inside the upper door.

CONS

The guide system can be finicky to set precisely. Its parts tend to creep out of position when you give them a final tightening. The guides have no micro-adjust nuts. This saw is noisier than most.



MINIMAX S14

- Price: \$650
- Power: 120 volts, 1-1/2 hp
- Maximum resaw capacity: 7-3/4 in.
- Wheel diameter: 14 in.

PROS

This is a powerful, extremely sturdy machine for the money. It's fine for both resawing and detail work. You can resaw at full capacity without slowing down the motor. The blade guides are stacked ball bearings, a type that offers quite a bit of support for wide blades. They're fairly easy to adjust, too. The wheels are heavy cast iron. For convenience, this saw has a very good quick-release tension lever, a crank for raising the blade guide post and a magnetic switch.

CONS

You can't increase this saw's capacity with a riser block. The table is somewhat small. The heads of the blade-guide thumbscrews are small, too, and hard to tighten. As with many other tools, the list price is higher than the street price we show. This saw is only available directly from MiniMax, so ask for the company's best price.

RECOMMENDATIONS

If all you need is a good saw for light-duty work, there's no need to spend more than \$400 on a bandsaw. Our Best Buy, the Grizzly G0555 (\$375), is a terrific value.

If you're interested in resawing (ripping wide boards on edge into thin pieces), cutting 2-in. or thicker lumber for legs and rails or making large bowl blanks from green wood, you'll need more power and rigidity. Both cost more money.

Normally, we pick an Editors' Choice in a tool test. That's the single machine that stands out as the best of its class. But with bandsaws, there aren't easily-defined classes from which to choose. You have no reason to limit yourself to a 14-in. saw, for example, when there are good 16-in. or larger saws that cost less. Rather than select a single Editors' Choice, we've chosen our favorite saws from four different price ranges.

The criteria we used to make our choices were pretty simple: plenty of power for the heavy work and easy-to-adjust blade guides for the light work. A good saw should have both. The really powerful 2-hp machines require 240-volt circuitry, however, and we know that a lot of shops have only 120-volt outlets. For that reason, in the upper price ranges, we've recommended saws in both voltages.

If your budget is from \$400 to \$500, the choice is easy. We recommend the Grizzly G0555. It's a good, basic machine and can take a riser block for a full 12 in. of resaw capacity.

From \$500 to \$625, we'd be happy with either the Delta 28-206 or the Jet JWBS-14CS. Sure, these two models have differences, but not overwhelming ones. We'd buy whichever is on sale or comes with more accessories. Unlike the Grizzly G0555, both use block-

Specifications								Guides			
Model	Price	Riser block price	Voltage	HP	Max. resaw capacity ¹	Wheel diameter ²	Blade capacity	Type of side guides	Side and thrust independently adjustable ⁴	Upper guide ease of adjustment	Lower guide ease of adjustment
Bridgewood BW-14WBS	\$600	NA	120	1	8"	14"	1/8"-3/4"	Small ball bearings	Y	***	**
Bridgewood BW-17WBS	\$900	NA	240	2	11-3/4"	17"	1/8"-1"	Large ball bearings	N/Y	**	**
Craftsman 22424	\$500	NA	120	1	6"	14"	1/8"-1/2"	Steel blocks	Y	***	*
Delta 28-276	\$500	\$100	120	3/4	12"	14"	1/8"-3/4"	Steel blocks	Y	***	*
Delta 28-206	\$600	\$100	120	1	12"	14"	1/8"-3/4"	Steel blocks	Y	***	***
Delta 28-475X	\$900	\$100	120	1-1/2	12"	14"	1/8"-3/4"	Steel blocks	Y	***	***
General Int'l 90-150 M1	\$620	NA	120	1	7-3/4"	14"	1/8"-1"	Disc/steel blocks ³	N/Y	**	**
Grizzly G0555	\$375	\$50	120	1	12"	14"	1/8"-3/4"	Small ball bearings	Y	***	**
Grizzly G1073	\$625	NA	240	2	7-1/2"	16"	1/8"-1"	Steel rods	Y	***	***
Grizzly G0513	\$750	NA	240	2	12"	17"	1/8"-1"	Discs	N/Y	**	**
Jet JWBS-140S	\$530	\$70	120	3/4	11-3/4"	14"	1/8"-3/4"	Polymer blocks	Y	***	**
Jet JWBS-14CS	\$575	\$70	120	1	11-3/4"	14"	1/8"-3/4"	Polymer blocks	Y	***	**
Jet JWBS-14X	\$715	\$70	120	1-1/4	11-3/4"	14"	1/8"-3/4"	Polymer blocks	Y	***	**
Jet JWBS-16	\$875	NA	120	1-1/2	10"	16"	1/8"-1-1/2"	Discs	N	**	*
Laguna LT-14	\$950	NA	120 or 240	1-1/2	8-1/2"	14"	1/4"-1"	Ceramic blocks	N	**	*
MiniMax S14	\$650	NA	120	1-1/2	7-3/4"	14"	1/8"-1"	Stacked ball bearings	Y	***	**
Powermatic PWBS-14CS	\$900	\$70	120	1-1/2	11-7/8"	14"	1/8"-3/4"	Stacked ball bearings	Y	***	**
Ridgid BS1400	\$380	\$60	120	3/4	12"	14"	1/8"-3/4"	Steel blocks	Y	***	**
Rikon 10-320	\$500	NA	120	1	6"	14"	1/8"-3/4"	Small ball bearings	N	**	**

**** Excellent *** Above average ** Average * Below average

NA Not Available 1 Includes riser block, measured to the nearest 1/4-in. 2 Rounded up to the nearest inch

3 Disc above table, blocks below table 4 Above/below table 5 UN = Unnecessary; motor has ample horsepower

style guide systems, which are better to set up with 1/4-in. and smaller blades.

From **\$625 to \$750**, 120 volts, we like the Jet JWBS-14X and the MiniMax S14. Both have more powerful motors than saws in the less-expensive saws categories. In this price range at 240 volts, we recommend the Grizzly G0513. This large 17-in. saw has a 2-hp motor. It's not ideal for small blades, but it resaws like a champ.

From **\$750 to \$950**, we like an old 120-volt favorite, the Delta 28-475X. It's easy to set up with any size of blade and has as much power as you're likely to get on a 120-volt circuit. The Powermatic PWBS-14CS is a close second, though. Compared with Delta's block-style guides, the Powermatic's bearing-style guides are a bit harder to set up with 1/4-in. and smaller blades. At 240-volts, we like the 2-hp Bridgewood BW-17WBS. It's very similar to the Grizzly G0513 but runs more

smoothly and sets up more easily with small blades for detail work.

One saw that stands out in a class by itself is the Laguna LT-14. It runs like a well-made Swiss watch and has a maintenance-free blade guide system that offers more support than virtually any other saw. Truth is, though, the guides are awkward to adjust. If you use the same size blade for most of your work, this saw is a fine choice. **AW**

COMING NEXT ISSUE
In this article, we reviewed bandsaws that cost up to \$1,000. There's nothing significant about this particular price; it's just a nice round number. You can spend a lot more on a bandsaw, however. In the next issue, we'll test saws that cost from \$1,000 to about \$1,500.

	Quick-release tension lever		Other features								Contact
	Standard feature	Full tension release	Stiff frame-to-base connection	Table size (W x D in inches)	Table rigidity	Easy to tilt table left	Fence standard equipment	Dust ports	Motor easy to upgrade ⁵	Number of speeds	
	Y	Y	••••	14 x 14	•	N	Y	1 @ 4"	Y	1	(800) 235-2100 www.wilkemachinery.com
	Y	Y	••••	17 x 17	••••	N	Y	2 @ 4"	UN	2	
	N	N	•	16 x 16	••	N	N	1 @ 2-1/2"	N	2	(800) 377-7414 www.sears.com/craftsman
	Y	Y	•	16 x 16	•	N	N	1 @ 4"	Y	1	(800) 438-2486 deltawoodworking.com
	Y	Y	•	16 x 16	•	N	N	1 @ 4"	Y	2	
	Y	Y	••	16 x 16	••••	Y	N	1 @ 4"	UN	1	
	Y	Y	•	14 x 14	••	N	Y	1 @ 4"	Y	1	(514) 326-1161 www.general.ca
	Y	N	•	14 x 14	••	N	Y	1 @ 4"	N	2	(800) 523-4777 www.grizzly.com
	N	N	•••	17 x 17	•	Y	Y	1 @ 2-1/2"	UN	3	
	Y	Y	••••	17 x 17	••••	N	Y	2 @ 4"	UN	2	
	N	N	•	15 x 15	••	N	N	1 @ 2"	Y	1	(800) 274-6848 www.jettools.com
	N	N	•••	15 x 15	••	N	N	1 @ 2"	Y	1	
	Y	N	•••	15 x 15	••	N	N	1 @ 4"	UN	1	
	N	N	••••	17 x 17	••••	N	N	1 @ 4"	UN	1	
	N	N	••••	19 x 15	••••	Y	Y	1 @ 3"	UN	1	(800) 234-1976 www.lagunatools.com
	Y	Y	••••	14 x 14	••••	N	Y	1 @ 4"	UN	1	(866) 975-9663 www.minimax-usa.com
	Y	N	•••	20 x 15	••••	N	Y	1 @ 4"	UN	1	(800) 274-6848 www.wmhtoolgroup.com
	N	N	•	14 x 14	•	N	N	1 @ 2-1/2"	Y	1	(800) 474-3443 www.ridgid.com
	N	N	••••	20 x 16	••••	Y	N	1 @ 2-1/2" 1 @ 4"	N	2	(877) 884-5167 www.rikontools.com

edited by David Olson

DOUBLE-DUTY FILE CABINET

I don't have enough room for a permanent outfeed table for my saw. Instead, I mobilized my file cabinet (it's great for storing saw blades, sandpaper, etc.) and added a melamine "flight deck" so it could serve double duty. It's even got a pop-up extension to reach over the saw's motor. Now I can safely rip boards up to 8-ft.-long.

First, I made a dolly for the cabinet. To make the base, I cut a piece of 3/4-in.-thick plywood 1-1/2-in. longer and wider than the cabinet. After installing the locking swivel casters, I captured the cabinet with 3/4-in.-wide edging.

I built the flight deck by screwing the melamine top to a pair of skirts. Cleats and screws fasten the deck to the file cabinet.

The extension mounts on sturdy folding shelf brackets that are super easy to install and use.

Michael Herberger

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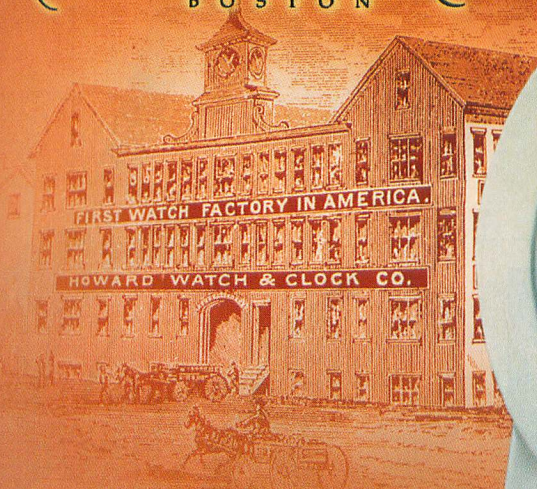
Sources

Highland Hardware
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084050, \$8 each (4 required).

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www.woodcraft.com
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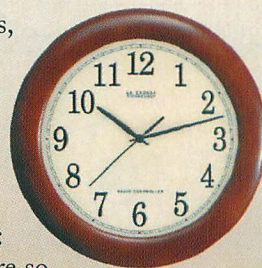
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Now I just unwind as much hose as I need and then connect the tied-on end to a short hose that runs to my compressor. When I'm done, I disconnect the short hose and wind the long hose back on the reel. It works great!

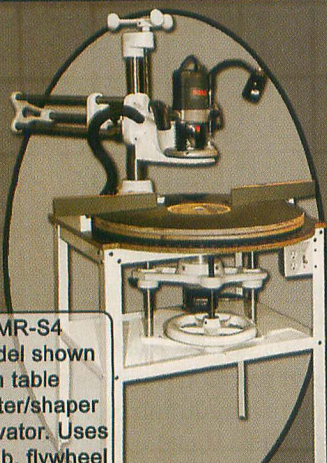
Dave Jarboe

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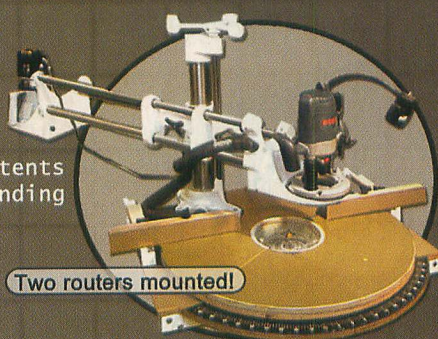
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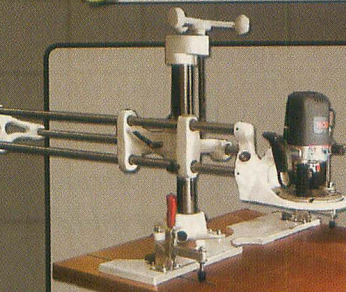
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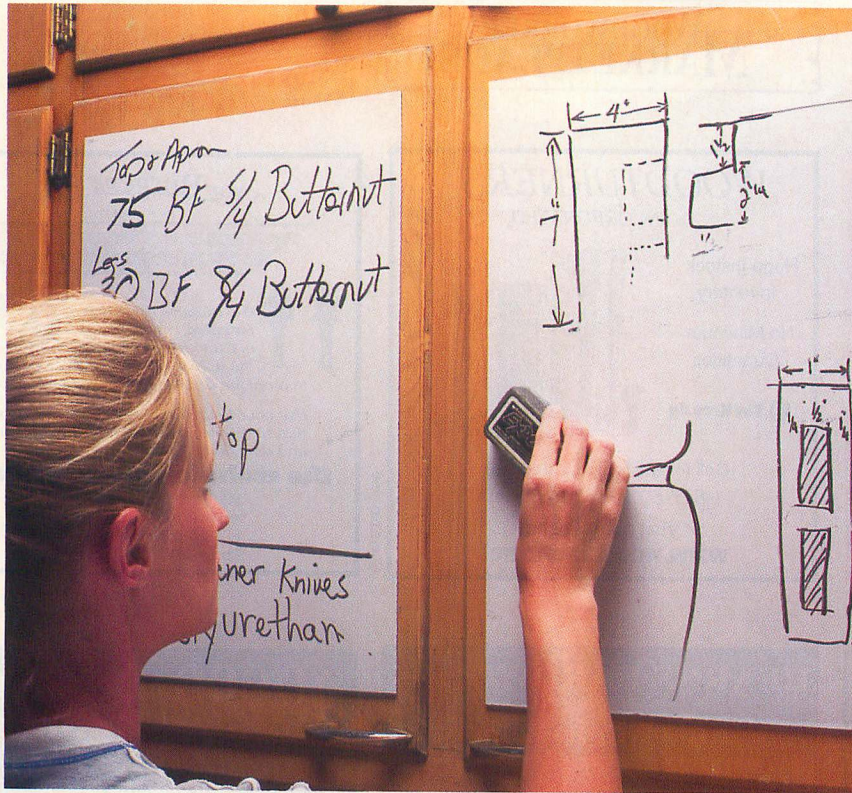
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Steve Jones
AW

American Woodworker OCTOBER 2004 89

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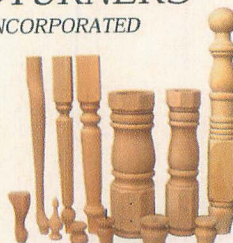
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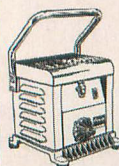
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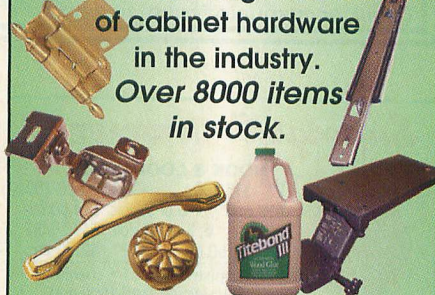
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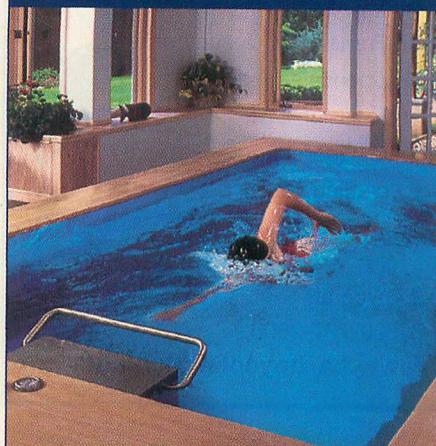
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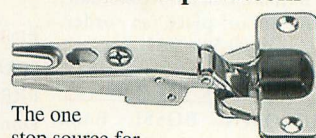
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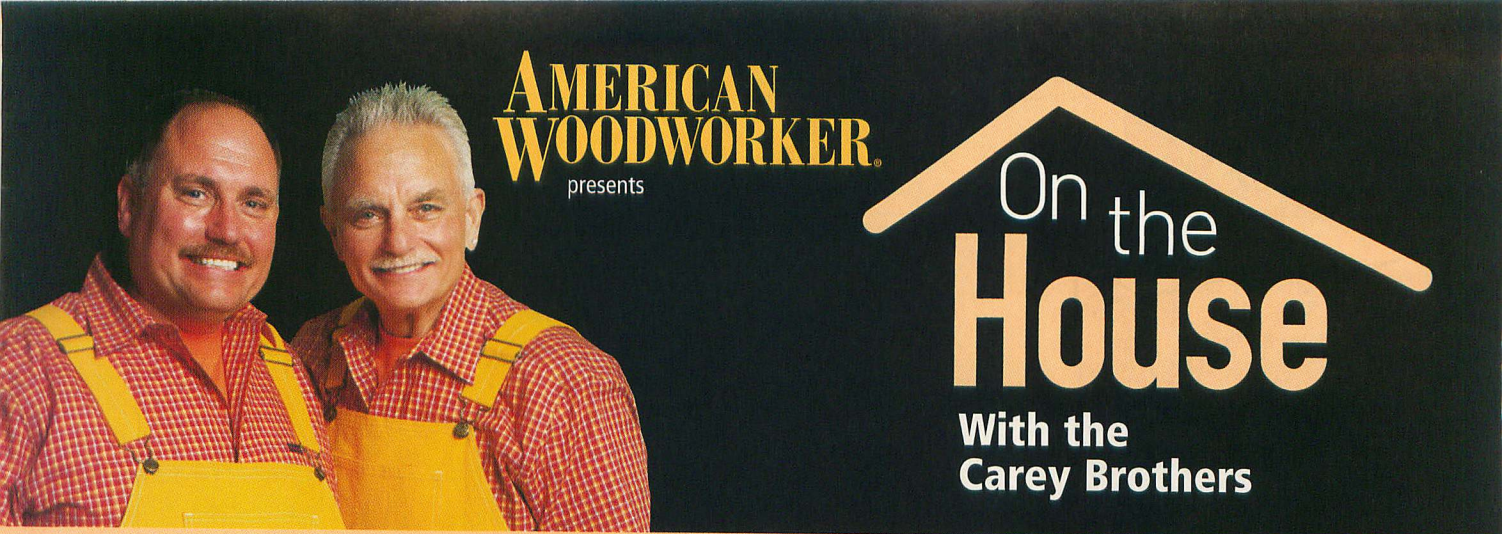
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Tips of the Month

We are proud to be associated with the premier woodworking magazine, and we are pleased to offer the following tips:

A Strapping Good Decision

Managing your inventory of specialized trim and molding can be quite challenging. One solution is to store the material in pigeon-hole shelving fabricated from plywood, particleboard, cardboard or plastic tubing. Or if you prefer an overhead or wall rack, use lightweight bungee cords to organize and bundle pieces together. These cords are strong, easy to store and unlike regular rubber bands, they last forever. Best of all, binding and releasing material only takes a second. For binding lots of material together try making your own banding from nylon strap material. You can purchase 1-inch nylon strapping for a few cents a foot with matching quick release connectors that cost about fifty cents a pair. Cut the strap to length, use a

lighter to prevent the cut ends from fraying and weave the strapping onto the connector. You'll now have your own homemade quick and easy binding that can be used again and again.

This same strap material can also be used to create storage space. As an alternative to shelving, simply mount the center portion of a 15" strap to the wall with two washered screws about 4 to 6 inches apart. Use wood screws with flat washers and make sure to tie into the wall or ceiling framing. The straps can be mounted every several feet to hold whatever lengths you wish to store. During those times when the straps are empty there is no shelf protruding into the room and taking up valuable space.

The Woodworker's Corner

A note from the Publisher of American Woodworker, Jim Schiekofer

This time of year, we suspect that many of you are splitting your focus between fall woodworking projects and the fall classic—the World Series. Well, this year the staff at American Woodworker (and our sister publication, The Family Handyman) has followed suit—we have entered a team in the Advertising Softball World Series in Orlando, Florida. This is an annual tournament that includes teams from the advertising and media communities, and we plan on representing our magazine, and our readers, proudly. We know you'll be cheering us on, and we invite you to come back to The Woodworker's Corner in the next issue to see how we made out.

edited by Tim Johnson



SHRINK-WRECKED DOOR

Needing a full-length cherry door for the pantry of a kitchen-remodeling job, I got the bright idea that, instead of making one from scratch, I could save time and money by veneering a ready-made door purchased at the local lumberyard.

Everything went smoothly as I laid the carefully prepared cherry veneer on top of the glue-covered door inside my vacuum bag press. I sealed the bag, started the vacuum pump and took a break for lunch. But when I came back, the door was crushed flat as a pancake! Only then did I realize a hollow-core door was the wrong choice for vacuum veneering.

Gary Hornbuckle

IT'S SOLID...VENEER!

Covered with scratches, gouges, water stains and candle burns, our 25-year-old teak dining table showed its age. Having done my share of refinishing, I was not daunted by the task of refurbishing our old friend.

After removing the worn-out finish, I began sanding with 150-grit paper in my random-orbit sander. The wood figure was coming back beautifully, clean

and blemish free, except for one stubborn spot. I focused extra sanding pressure on that area. At first the spot appeared to lighten, but as I continued to sand, I was horrified to see the unmistakable texture of particleboard. Argh!

I had always thought our table was solid teak, but I'd just discovered the top was veneer!

Mark Schreiner

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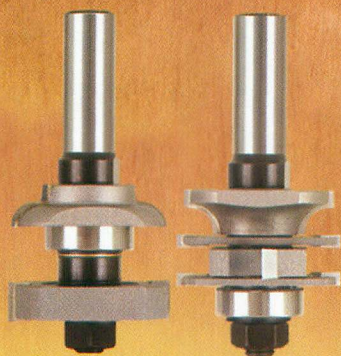
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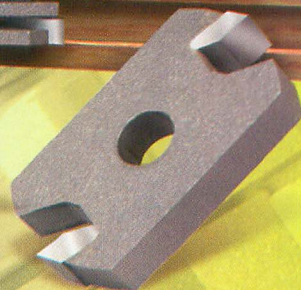
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